The Stellar Distribution and Interstellar Reddening in the Milky Way at $l = 268^0$, $b = 0^0$.

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A thesis presented to the department of Astronomy, St. Mary's University, in partial fulfillment of the Master of Science degree.

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Abstract

This thesis presents a stellar space density analysis in the galactic plane at $l = 268°$. The data consist of photographic UBV photometry for 2461 stars and MK spectral classifications for 1713 of these. A colour-excess analysis reveals an absorption "wall" rising from $A_V(r) = 0^m.8$ to $3^m.7$ between $\bar{r} = 850$ and 1350 pc. Beyond the dust cloud, there is little or no further extinction to a distance of at least 5 kpc from the Sun. Reduction of m-log π tables with Reed's iterative technique yields space distributions consistent with those in other galactic plane fields. The stellar space densities variations show a remarkable generality among the various spectral groups. The stellar densities peak near 400 pc, decline to ~30% of the mean densities at 800 pc, and then increase again within the prominent dust cloud. Three OB associations are found at 1.15, 2.1, and 5.0 kpc, the furthest one possibly marking a distant spiral arm.

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I. Introduction

Star counting as a technique for exploring the Galaxy was an invention of Sir W. Herschel. In the latter part of the 18th century he attempted to determine the extent of the Galaxy by counting the stars in many fields along a great circle crossing the sky. Under the assumption that all stars are equally luminous and uniformly distributed in space, then their surface density is related to the distance to the galactic edge (Hoskins 1985). By 1817 W. Herschel was convinced that "condensations and vacuums" were necessary to explain the differences between his observed star counts and those computed on the assumption of a uniform stellar density. J. Herschel in 1847 derived intrinsic luminosities for 191 stars and discovered considerable variations in their values (McCuskey 1966). In 1898, H. von Seeliger elaborated on the mathematics and derived the "fundamental equation of stellar statistics". This describes the observed star counts in terms of a density function which allows for variations in the stellar space density along the line of sight and a luminosity function representing the distribution in absolute magnitude of the stars in a volume of space (Paul 1985).

Bok (1937), in his classic text, reviewed the early applications of stellar statistics to the problem of deriving space densities within the Galaxy. Unfortunately, these early investigations either did not consider the effects of interstellar extinction or, after the existence of absorption was generally accepted, applied only an estimated mean value in the corrections. The accuracy of space-density studies depends critically on the handling of the interstellar absorption. McCuskey (1965) represents, for fields within the galactic plane, the most comprehensive study conducted so far. Recent applications have concentrated on fields at the galactic Poles and seek to constrain parameters on stellar distribution models rather than to determine densities directly through the fundamental equation (see Bahcall 1986 for a review).

In this thesis, I use the classic technique to investigate the space densities in the galactic plane towards the constellation Vela. The field, referred to hereafter as MW268, is located in the southern Milky Way at l = 268°, b = 0° (R.A. 9^h04^m, DEC. -47° [2000.0]). Centred on the bright star HR 3614 (HD78004), this roughly square field covers 12.14 square degrees. The line of sight is very nearly along the third and fourth quadrant boundary in the interarm region between the Local and Carina spiral features (Forbes 1983, Elmegreen 1985). Figure 1.1 (adapted from Vogt & Moffat 1975) indicates the galactic spiral features in the solar neighbourhood as traced by young open clusters.

There are no obvious clusters within the field; however, several OB associations may cross or extend into MW268 (Humphreys 1978, Brandt 1971, Miller 1972). A wide dust lane crosses the field coincident with the galactic plane (Feitzinger & Stuwe 1986 - Fig. 7). Neutral hydrogen surveys show a distinct low-velocity concentration of HI straddling the galactic equator from l = 255° to l = 275° and perhaps connected to HI in the Carina Arm (Bloemen *et al.* 1983). A recent survey of CO emission shows an extensive bright region in the same direction

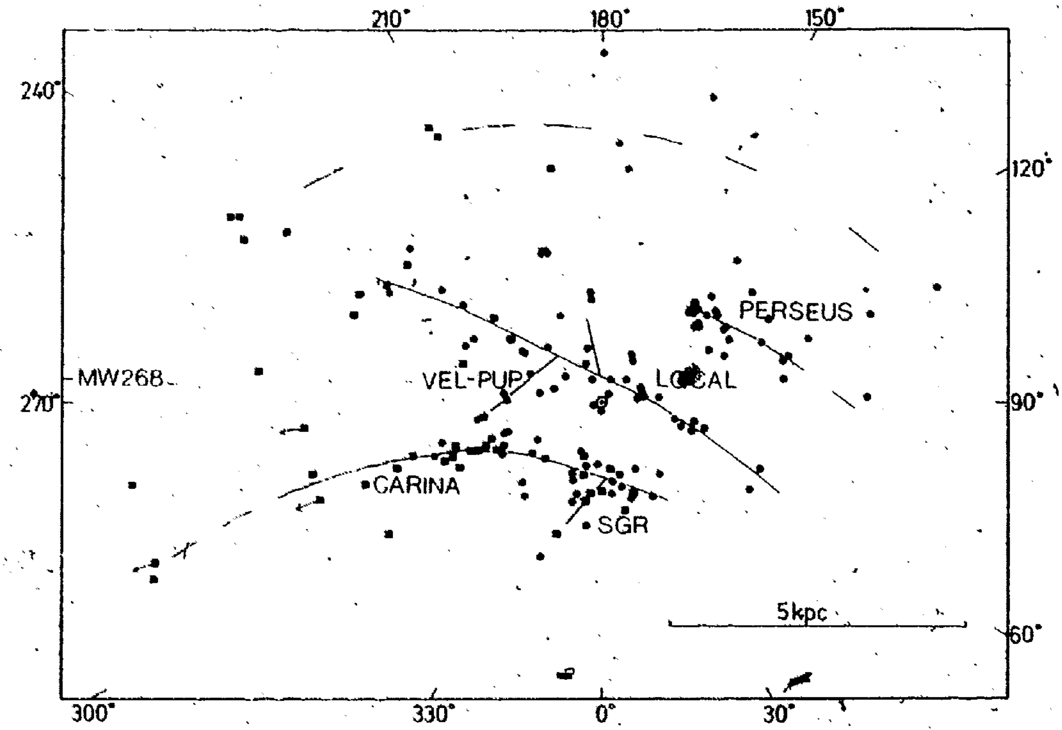

Fig. 1.1 Local spiral features as traced by young open clusters. The border is marked in galactic longitude and the Sun is at the centre. MW268 is at l = 268°. Note the Pup-Vel spur branching from the Local Arm and crossing the MW268 field. (Adapted from Vogt & Moffat 1975).

indicating the presence of molecular hydrogen (Dame *et al.* 1987). The entire region is overlaid by the large Gum Nebula and the Vela supernova remnant (Bruhweiler, Kafatos, & Brandt 1983).

Velghe (1970) investigated the OB stars in Vela and suggested that there may be a spiral feature in the field. Further studies of OB stars, supergiants, and R-associations lead to similar ideas; maps of spiral features show the Local Arm or a spur from it extending out into the Puppis-Vela region approximately tangent to the Solar circle (eg. Humphreys 1970, Walborn 1973, Herbst 1975). Vogt & Moffat (1973, 1975) considered the positions of young open clusters and identified a spur branching from the Local Arm in Puppis, crossing through Vela about 1 kpc from the sun, and possibly connecting to the Carina Arm (Fig. 1.1). The stellar distribution in the Puppis-Vela region has been investigated by several studies and these have indicated high stellar space densities particularly for A-type stars in some fields (Wooden 1971, Wilson & FitzGerald 1972, Stegman & FitzGerald 1972, Moore & FitzGerald 1973, McCuskey & Lee 1976, Reed & FitzGerald 1984, Burns *et al.* 1984, Eggen 1986). In Vela, a region of heavy obscuration ($A_v \sim 3^m$) begins about 1 kpc from the sun creating difficulties for work in this part of the Galaxy (FitzGerald 1968, Neckel & Klare 1980).

Photographic density variations in near-IR images of spiral galaxies suggest a correlation between the variations and the spiral patterns observed at visual wavelengths. In terms of the density wave theory, these are interpreted as stellar density variations of 40-60% amongst the common, as opposed to the luminous, disk stars (Schweizer 1976, Elmegreen & Elmegreen 1984). This suggests that spiral features in the Solar neighbourhood should be evident as density variations in the mixed disk population. Indeed, McCuskey's (1965) isodensity maps of the galactic plane near the sun do suggest a ridge of enhanced stellar densities amongst the B, A, and F-type stars paralleling the Local Arm as traced by young objects (but placing the sun nearer to the centre of the feature than usual). The primary aim of this thesis is to investigate the stellar space density variations along a line-of-sight crossing the Puppis-Vela spur.

The problem is to determine the number density of stars in various spectral groups along the line of sight from the stellar distribution projected onto the celestial sphere. The input data consist of the number of stars within the field in each spectral group as a function of apparent magnitude. The star count $A(m,S)$ represents the number of stars in an apparent magnitude interval $[m-1/4\ ,\ m+1/4]$ with spectral types in the spectal group S. These are related to their spatial density $D_s(r)$ through the fundamental equation of stellar statistics (after Mihalas & Binney 1981)

$$A(m,S) = \omega \int \Phi(M,S)\ D_s(r)\ r^2\ dr$$

where ω is the solid angle subtended by the field, $\Phi(M,S)$ the specific luminosity function for stars in group S, and r the absorption-corrected distance. The integral can be inverted by the computational device of m-log π tables and a solution found for $D_s(r)$ consistent with the observed star counts. Except for the luminosity function, this method is model independent and a direct technique for determining stellar distributions.

The luminosity function has been investigated in the Solar neighbourhood and the assumption is made that it applies equally well at other locations in the Galaxy (McCuskey 1966). For a narrow range in spectral type this is a reasonable assumption at least within 1-2 kpc of the sun. The luminosity function $\Phi(M,S)$ essentially describes the distribution in absolute magnitude of stars of type S about the mean absolute magnitude for that group and is usually (and here) assumed to be a Gaussian with a characteristic mean M_v and dispersion σ. The dispersion defines the range in distance modulus over which stars of type S contribute to the star counts; a large dispersion implies that the star counts $A(m,S)$ contain stars from a wide range in distance effectively smearing out information about real density variations. It is therefore advantageous to group stars according to their spectral types such that the dispersion in M_v is small, typically $0^m.5$.

Beginning with section II, I discuss the determination of MK spectral classifications for 1713 stars within MW268. This is followed in section III by a brief description of the photographic photometry in U, B and V for 2461 stars, including all those previously classified. In section IV I discuss the interstellar absorption in the field determined from an analysis of the variation in colour-excess with distance. In section V the reduction to space densities for the common stars and the distribution of the OB stars is considered. Section VI discusses the results.

Finding charts covering the entire MW268 field are in Appendix A. The field has been divided into 25 subsections and organized into a 5x5 square grid. The grid is aligned with the RA and DEC directions and the subsections are identified by a letter - number coordinate. Locations in the DEC direction are designated by B,...,F progressing southward and in RA by 2,...,6 increasing eastward. For instance, the central section is designated 'D4' and the northeast corner 'B6'. Stars within each section are numbered sequentially (with some gaps) but without any particular regard for their position within the section. For computational convenience, I have equated the letter - number designations with numerical constants such that B2 equals 1000, B3 equals 2000,..., and F6 equals 25000 which are added to the star number to yield a unique designation for each MW268 star. The scale on these charts is ~17".3 /mm.

Appendix B tabulates magnitudes and spectral classifications for all the stars surveyed and appendix C provides a cross-reference between HD, MW268, SAO and other designations.

II. Spectral Classification

Classifications of spectra on six objective-prism plates were used to assign MK spectral classifications for this project. The plates were acquired with the 24/36" Curtis Schmidt telescope at CTIO by Dr. M. P. FitzGerald during various observing runs between 1969 and 1973. Table 2.1 details the particulars of each plate.

To gain experience, I first determined MK spectral classifications for all HD stars within the field and compared these with the classifications given for the same stars in the Michigan Spectral Catalogue (vol II, Houk 1978). Positions in the SAO and Michigan Spectral Catalogues enabled the identification of 205 HD stars, each of which received five independent classifications from spectra on five different plates: 3716-10, 3721-10, 3725-4, 6579-4 and 12780-4. This set provided a range in

Table 2.1 Objective-Prism Plates

Plate No.	Emulsion	Prism [degrees]	Exposure [mins]	Date	Disp. [A/mm]
3716-10	IIa-O	10	20	Mar. 8/9, 1969	110
3721-10	IIa-O	10	8	Mar. 8/9, 1969	110
3725-4	IIa-O	4	60	Mar. 11/12, 1969	280
6579-4	IIa-O	4	20	Apr. 28/29, 1970	280
12780-4	103a-O	4	5	Mar. 22/23, 1973	280
12804-4	103a-O	4	92	Mar. 24/25, 1973	280

exposure time, dispersion, spectrum width, background fog, and quality – all factors affecting the visual appearance of spectra. Determining spectral classes involved comparing each objective-prism spectrum, viewed through a binocular microscope, with the classification standards in *Revised MK Spectral Atlas of Stars Earlier than the Sun* (Morgan, Abt & Tapscott 1977) and *An Atlas of Spectra of the Cooler Stars* (Keenan & McNeil 1974).

Figure 2.1 shows graphically the difference between the Michigan Catalogue classifications and my average classifications for the MW268 HD stars. Note that more than one star may be at each point. The straight line across the figure is the locus of points indicating agreement between the two classifications. The lack of a systematic shift or curvature in the distribution of the points indicates that there are no systematic deviations between the classifications. The mean residual in the scatter is

$$\langle \text{Michigan} - \text{MW268} \rangle = -0.003 \pm 0.20 \quad (\text{s.d. } n = 196).$$

The rms residual, 0.20, implies a classification uncertainty of about 2 subclasses. This uncertainty is acceptable since subsequent analysis will use spectral groups at least 4 subclasses wide.

Figure 2.2 illustrates the differences between the Michigan and MW268 luminosity classes. Each box indicates the number of stars occupying that location in the Michigan versus MW268 luminosity class plane. The double bordered boxes indicate agreement between the classifications; there is a slight tendency on my part to assign lower

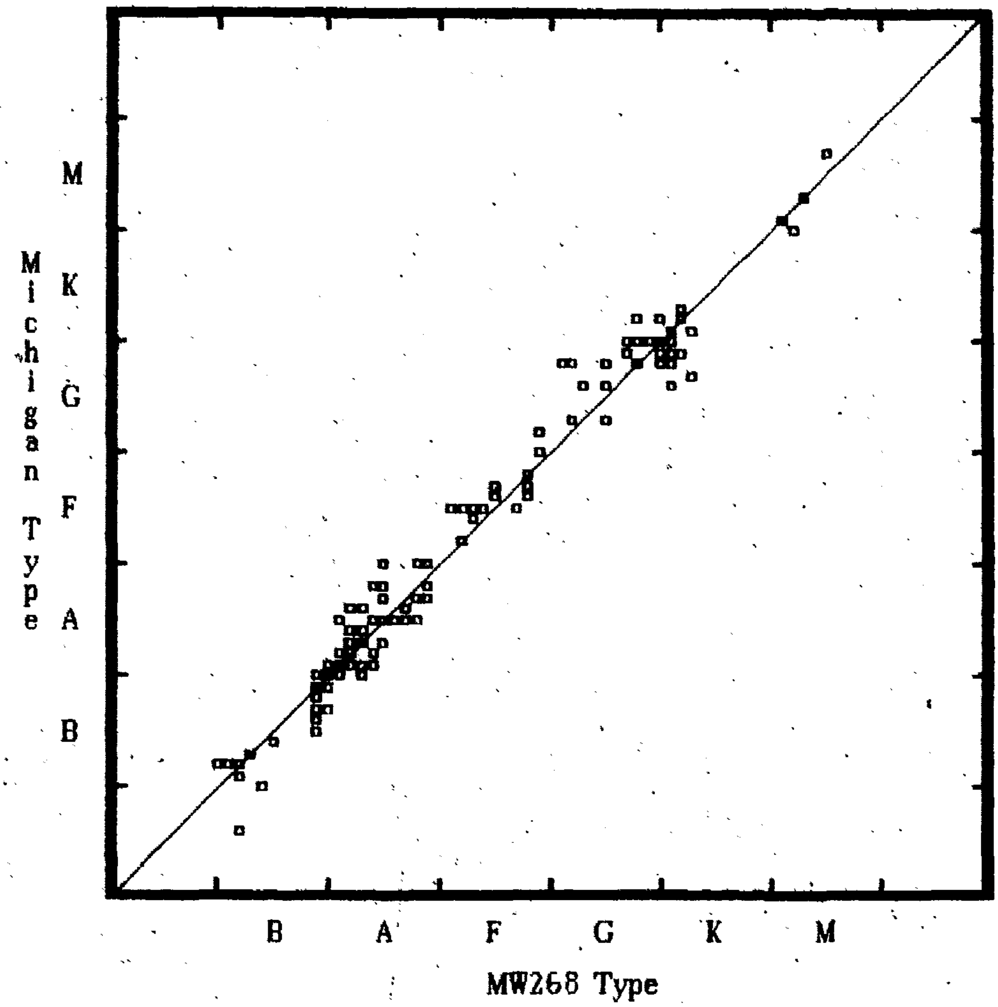

Fig. 2.1 Comparison of MW268 Spectral Types with those in the Michigan Spectral Catalogue. The straight line corresponds to exact agreement between the catalogues. Note: more than one star may be at each point.

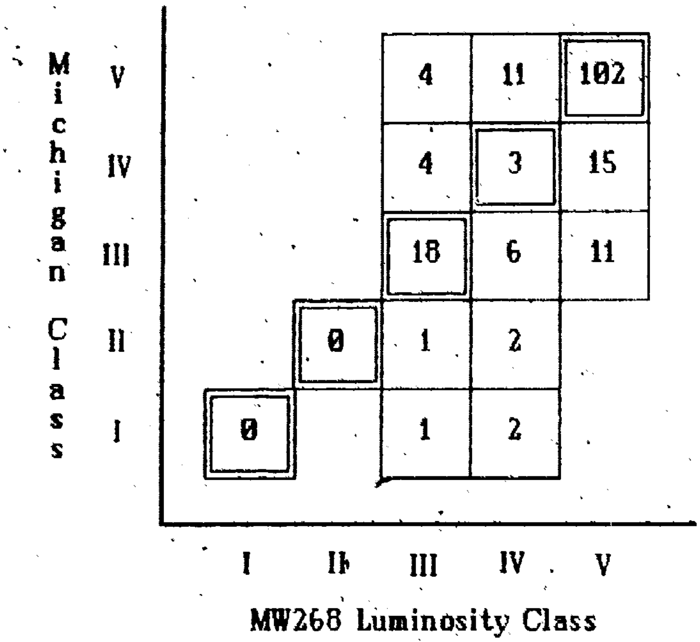

Fig. 2.2 Comparison between assigned Michigan and MW268 luminosity classes. Double bordered boxes correspond to agreement. Each box contains the number of stars at each grid location.

luminosities than given in the Michigan Catalogue. This bias results in slightly overestimating the extinction and thus marginally increasing the final space densities. Luminosity classes, which rely on narrower, less obvious spectral lines than temperature classes, are more difficult to determine on objective-prism plates. However, since there are relatively few high-luminosity stars the systematic error incurred is small.

This test of classification quality is based only on the brighter stars in the field and may not reflect the uncertainty in the spectral types assigned to the fainter stars. There is no possibility of testing this and these stars do compose the bulk of the data. This uncertainty must be borne in mind when considering the spectrophotometric data of this project; they are useful primarily when analyzed collectively by statistical methods.

Spectral types for the program stars were determined from classification of plates 3716-10, 12780-4 and 12804-4. The quality and magnitude range of adequately exposed spectra governed this choice of plates. On these plates, nearly every star brighter than $12^{m}.5$ (V) had at least one partially classifiable spectrum. In an effort to maintain a uniform classification quality, I consulted the spectral atlases for nearly every spectrum examined. Specific line ratios were utilized when the lines were discernable but otherwise the general appearance of the spectrum was considered. In the latter case, only a partial classification was usually assigned.

Appendix B lists the assigned classifications for all spectra examined. When classified on more than one plate, an average spectral type is given with full classifications receiving preference in the averaging process. A colon indicates uncertainty and notes on peculiarities or problems appear in the final column. Of 1911 program stars brighter than the adopted magnitude limit, $12^{m}.75$ (V), 1133 received full classifications, 315 a temperature type, 123 a letter class only, and 340 were unclassified. Most of the unclassified stars were added to the program during subsequent photometry in order to insure a complete magnitude limited sample (see section V).

III. Photographic Photometry

A major part of this project involved photographic photometry with the partially automated iris photometer at St. Mary's University. This is an Astro Mechanics Cuffey Iris Astrophotometer coupled to an IBM-PC microcomputer which controls the diaphragm motions and records the null positions. The operator needs only to centre the image within the iris and enter an identification number into the data file. Details of the system have been published by Reed *et al.* (1986).

The photographic plate material was acquired with the 24/36" Curtis Schmidt telescope at CTIO by Dr. M. P. FitzGerald. Table 3.1 lists the best six direct plates (two in each colour) chosen from a set of fourteen, based on background fog, image quality, and the distribution of residuals along the calibration curve.

Table 3.1 Plate Material - Direct

Plate No.	Passband	Emulsion	Filter	Exposure [mins]	Date
3759	V	103a-D	GG14	5	Mar. 14/15, 1969
6634	V	IIa-D	GG14	10	May 1/2, 1970
12843	B	103a-O	GG13	10	Mar. 28/29, 1973
12851	B	103a-O	GG13	10	Mar. 28/29, 1973
6552	U	IIa-O	UG2	30	Apr. 27/28, 1970
12847	U	103a-O	UG2	20	Mar. 28/29, 1973

Calibration standards were adopted from the photoelectric sequence published originally by FitzGerald *et al.* (1969) and extended in FitzGerald (1970) and Stegman (1970). The adopted magnitudes are primarily from FitzGerald (1970) and for those stars not on this list from Stegman (1970). Initially, the entire set of standards were measured on all plates and calibration curves plotted. Standard stars consistently lying well off these curves were rejected; these most likely arise from crowding of faint images near the standard itself. Table 3.2 details the photoelectric sequence and provides a cross-reference to the finding charts (Appendix A).

To avoid any problems with long-term drift in the iris photometer, I calibrated each measuring session individually. Standards were measured both at the beginning and at the end of each session. Short-term drift, often the order of 1 iris unit per hour, limited measuring sessions to a maximum of about four hours duration. (For these plates, a one iris unit change corresponds to a $\sim 0^{m}.0075$ drift.) Some early sessions extended to over seven hours in duration and drifts of up to $0^{m}.04$ were detected in the standards. This is not a serious problem as the introduced error is less than the rms residual for a typical calibration fit.

Plate calibration was effected by least squares fitting a low-order polynomial to the measures of the standard stars. Schaefer (1981) modeled the shape of calibration curves and suggested that an approximately linear relation between the area of the iris aperture and the

Table 3.2 The Photoelectric Standard Sequence in MW268

Sequence Number	MW268 Number	V	B - V	U - B	HD Number
1	13003	3.75	1.19	1.19	78004
2	13042	11.65	0.54	0.11	
3	13013	10.94	0.61	0.18	
4	13040	12.21	0.36	0.22	
5	18119	11.28	0.38	-0.03	
6	18009	9.98	0.28	0.07	78266
7	18025	10.98	0.50	0.00	
8	18010	9.09	0.00	-0.02	78206
9	18115	12.91	0.60	-0.04	
10	18006	10.08	0.22	0.10	77943
11	18030	11.08	0.50	0.00	
12	18017	11.43	0.28	0.13	
13	18003	6.45	-0.16	-0.65	78005
14	18005	8.11	-0.09	-0.42	77904
15	18028	11.08	0.50	0.04	
16	18004	10.30	0.51	0.02	
17	18002	10.53	0.10	0.11	78040
18	16710	5.18	0.25	0.18	77140
19	11074	12.05	0.43	-0.02	
20	12021	10.90	0.56	0.01	
21	17116	10.59	0.58	-0.02	
22	17009	8.76	0.91	0.54	77271
23	17008	10.82	0.34	0.15	
24	17007	9.50	1.59	1.25	77401
25	17006	9.06	0.09	0.07	77400
26	17040	11.72	0.62	0.08	
27	17109	7.74	0.23	0.13	77511
28	17038	12.38	0.74	0.43	
29	17053	12.05	0.46	0.08	
30	17010	9.29	1.85	2.22	77552

Table 3.2 The Photoelectric Standard Sequence in MW268

Sequence Number	MW268 Number	V	B - V	U - B	HD Number
31	15007	5.81	-0.22	-0.84	79275
32	18013	8.97	1.12	0.00	78344
33	9005	8.62	0.51	-0.35	78785
34	16005	8.81	0.34	-0.10	76536
35	13029	11.86	0.37	-0.02	
36	13001	10.12	0.12	—	77903
37	12125	13.43	0.64	-0.02	
38	12124	12.95	0.76	0.23	
39	12050	11.66	1.57	1.20	
40	s40@	13.84	2.58	1.77	
41	s41@	14.69	1.38	0.98	
42	13030	11.70	0.38	-0.02	
43	s43@	13.94	1.15	0.56	
44	s44@	14.69	0.80	0.18	
45	s45@	14.76	1.78	1.50	
46	s46@	13.13	1.28	1.13	
47	13101	12.64	0.66	0.08	
48	s48@	13.40	0.68	0.14	
49	13105	12.96	0.66	0.08	
50	13032	12.59	0.46	0.15	
51	s51*	5.31	0.28	—	76360
52	5002	6.66	0.43	-0.03	79403
53	16006	8.20	0.41	-0.66	76556
54	11007	9.06	0.81	—	CP-463272
55	s55*	9.65	0.49	—	CP-472896
56	s56*	9.66	0.22	—	CP-472857
57	21006	9.79	0.72	—	CP-472976
58	13004	9.00	-0.40	—	78186
59	18008	8.96	1.10	—	78344

* not within field of finding charts
@ located in sections D3/4 (12000, 13000)

magnitude of the stellar image holds over a wide range. Null readings from the St. Mary's iris photometer are very nearly proportional to the diameter of the iris; therefore, the iris reading squared is proportional to its area. Considering this, a polynomial of the form

$$\text{pe mag} = \alpha I^n + \beta I^2 + \gamma$$

where n = 4 or 5, and I is the (normalized) iris reading

was adopted for trial fits. The quadratic term expresses the proportionality between the image area and its magnitude, and the high-order term corrects for any slight nonlinearity in this relation. With iris readings normalized to values near 1.0, α was always much smaller than β (α/β ~0.1-0.01).

Observations lying more than 2.5 σ from the best fit curve were deleted and the fitting procedure iterated until a satisfactory fit was achieved. This usually required at most 2 iterations. A residual plot of the final fit was examined for curvature (wrong order polynomial), a shifted mean (uneven distribution of outliers) or any other systematic departures from a random distribution and was discarded if any of these problems appeared. A different polynomial might be tried or outlying points discarded with a view to creating an even distribution of residuals about the best fit curve. Very occasionally an entire irising session was discarded. The rms residuals for the standard sequence were nominally $0^m.08$, $0^m.07$, and $0^m.1$ in V, B, and U respectively. These values are typical for Schmidt plates. A residual plot for session V3759K is shown in figure 3.1.

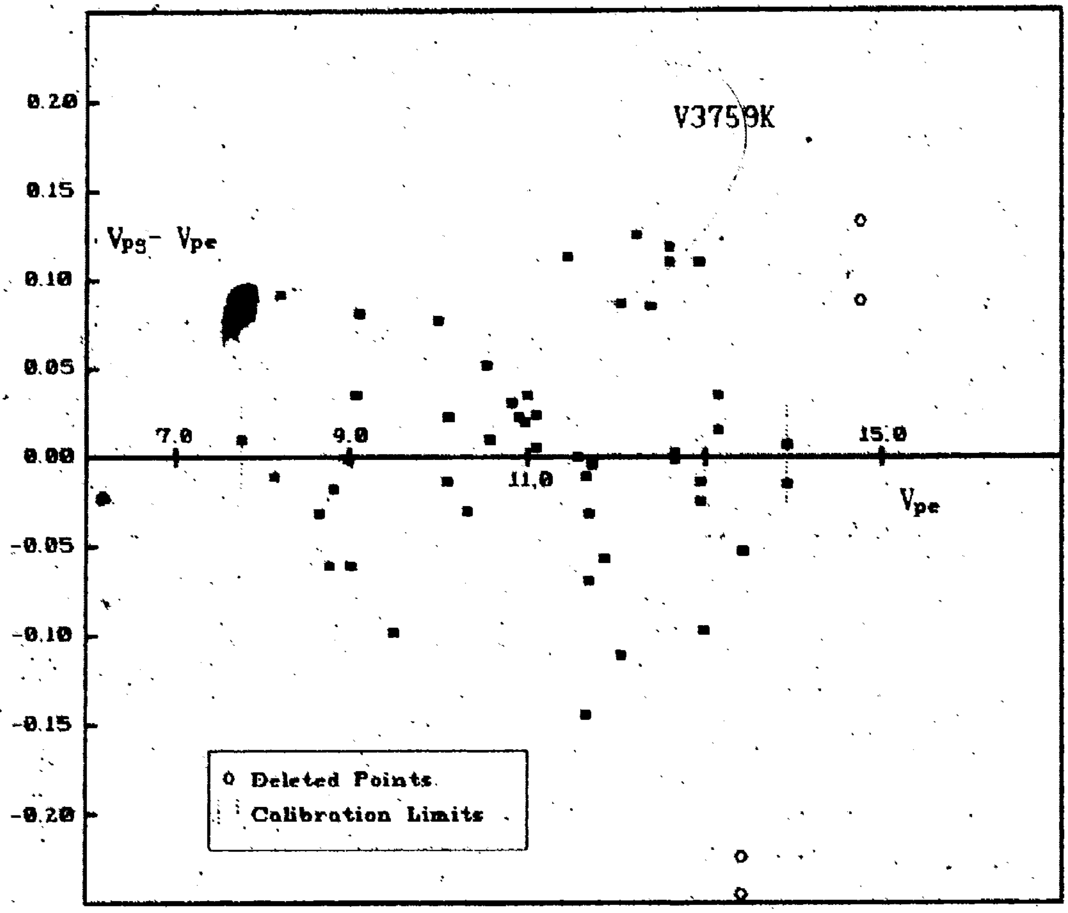

Fig. 3.1 Calibration Residuals for Iris Session V3759K

Calibration Polynomial for Iris Session V3759K:

$\alpha I^5 + \beta I^2 + \gamma$ = pe magnitude

α = -0.0379 (± 0.0232)

β = 3.9740 (± 0.1030)

γ = 5.4020 (± 0.0849)

rms = 0.069 magnitude (s.d. 53 points)

Each iris session polynomial fit was used to compute raw photographic magnitudes for the program stars measured in that session. Separate measurements of the same star in the same colour were then averaged. Colour equations were then determined by fitting a model of the form

$$pe - pg = c1 + c2 * (pe\ colour)$$

to the standard stars by weighted least squares (pe weight = 10, pg weight = 1). The resulting colour equations are:

$$V_{pe} - V_{pg} = -0.058(\pm 0.027) + 0.090(\pm 0.047)[\ B - V\ ]_{pe}, \quad rms = 0.038$$
$$(B-V)_{pe} = 0.032(\pm 0.043) + 0.971(\pm 0.077)[\ B - V\ ]_{pg}, \quad rms = 0.055$$
$$(U-B)_{pe} = -0.002(\pm 0.005) + 0.971(\pm 0.023)[\ U - B\ ]_{pg}, \quad rms = 0.054.$$

Final magnitudes for each star were then computed using the appropriate polynomial calibration and colour correction. A residual plot of the final derived magnitudes for the standards is shown as figure 3.2. Appendix B lists the final magnitudes, colours, and formal errors for all stars measured.

Included in appendix B are three columns listing the standard deviation of the mean for measures of the same star made in the same colour on different plates. For some sections of the field these are more than $0^m.5$; for two measurements, these values are equal to the absolute difference between the derived magnitudes divided by root 2. There is apparently a systematic difference between each of the two plates in every colour.

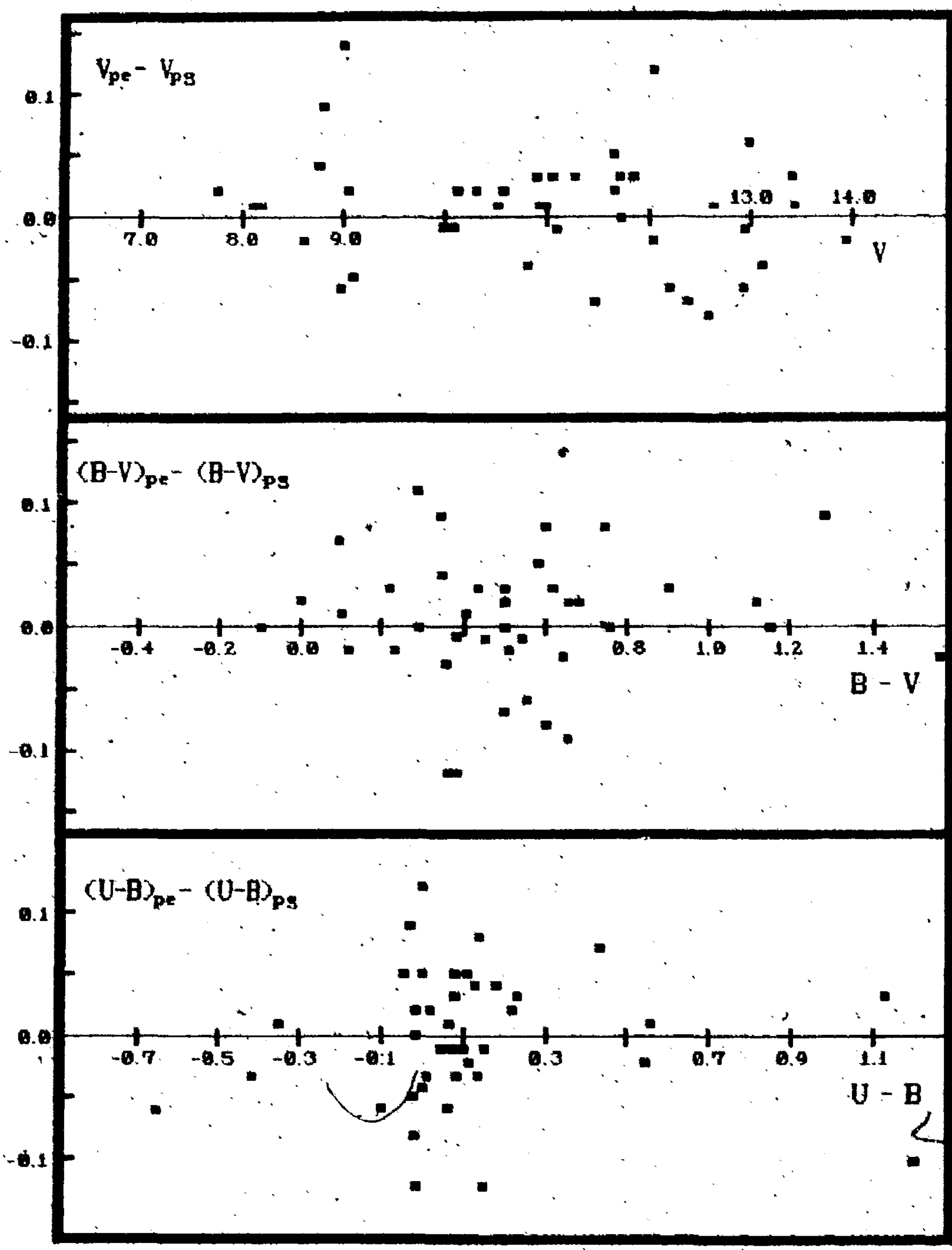

Fig. 3.2 Residuals of standard photoelectric values minus photographic measures for the MW268 standards.

Fig. 3.3 Mean Standard Deviations of Derived Magnitudes by Section.

V Plates (n = 20 stars)

	2	3	4	5	6
B	0.31 0.05	0.30 0.06	0.27 0.09	0.40 0.05	0.64 0.07
C	0.13 0.05	0.21 0.06	0.21 0.06	0.40 0.05	0.34 0.05
D	0.06 0.03	0.07 0.04	0.10 0.03	0.39 0.07	0.44 0.04
E	0.02 0.01	0.30 0.02	0.03 0.03	0.12 0.05	0.32 0.06
F	0.06 0.04	0.04 0.02	0.06 0.03	0.04 0.03	0.06 0.04

B Plates (n = 30 stars)

	2	3	4	5	6
B	0.13 0.05	0.11 0.04	0.19 0.07	0.19 0.06	0.27 0.06
C	0.06 0.09	0.05 0.04	0.09 0.03	0.15 0.04	0.16 0.07
D	0.06 0.04	0.05 0.04	0.06 0.04	0.11 0.04	0.18 0.06
E	0.05 0.03	0.04 0.04	0.04 0.03	0.05 0.04	0.12 0.05
F	0.13 0.06	0.05 0.03	0.04 0.03	0.06 0.03	0.06 0.03

U Plates (n = 30 stars)

	2	3	4	5	6
B	0.12 0.07	0.07 0.06	0.09 0.08	0.16 0.05	0.23 0.07
C	0.07 0.05	0.07 0.05	0.13 0.06	0.18 0.08	0.19 0.07
D	0.06 0.05	0.06 0.05	0.05 0.04	0.14 0.06	0.32 0.07
E	0.08 0.05	0.07 0.08	0.05 0.04	0.11 0.07	0.13 0.08
F	0.08 0.05	0.06 0.04	0.07 0.04	0.07 0.04	0.27 0.09

Figure 3.3 illustrates the discrepancies. The 5x5 matrix of squares is the MW268 field divided into its 25 subsections. Each section box contains the mean of the standard deviations for the first 20 or 30 stars in that section along with the standard deviation of *this* mean. Two systematic trends are evident. First, the mean deviations are small around the corner at F2 and increase progressively towards the opposite corner at B6. This effect is evident in all colours. Second, the standard deviations of the mean are consistently small everywhere in the field, again in all colours.

Iris measures of two stars with the same magnitude at different positions on a plate yield the same readings only if their image structures are identical (Stock & Williams 1962). Telescope aberrations and any misalignment of the plate with respect to the focal plane of the telescope will result in a nonuniform image structure across the plate and systematic differences in measured magnitudes. Schmidt cameras are particularly susceptible to generating "field erorrs" because the fast optics and wide field are very unforgiving to small errors in plate alignment. A set of standard stars well distributed everywhere within the field could be used to determine positional corrections to the photographic measures allowing reduction of the field errors. The MW268 standards, unfortunately, concentrate towards the centre of the field with only a few, brighter stars in the periphery. Moreover, since the St. Mary's iris photometer does not yield any positional information about the image under measurement, there is no direct method of removing the observed systematic errors from individual plates.

To improve confidence in the usefulness of the iris photometry, I compared independently determined magnitudes for as many stars as possible with my photographically derived values. Photoelectric magnitudes for 43 MW268 stars are listed in Nicolet (1978), Miller & McCarthy (1974), and Schild *et al.* (1983). Figure 3.4 shows the mean absolute differences between catalogue and photographic values for each field subsection with stars in common and the number of stars compared. The small number statistics (1 or 2 stars per section) provide only limited support to the reliability of the results in any given section; however, when the entire set is considered, the overall impression is that the mean photographic magnitudes (averaged between the two plates measured in each colour) do *not* deviate from photoelectric values by more than acceptable amounts. The differences are less than the magnitude dispersions of the luminosity functions adopted for reduction of the m–log π tables and should not significantly degrade the space density results. (Section B5 has an anomalously large deviation; this is due to the iris photometer's inability to correctly measure the double star's image.)

Miller & McCarthy's (1974) photoelectric sequence near the O5.5V star HD76556 (a member of Vel OB1 - Humphreys 1978) has 11 stars in common with the MW268 program. Table 3.3 shows a comparison between their photoelectric and MW268 photographic magnitudes. These stars lie within a region of MW268 where the derived results are internally consistent (section E2); they do not help resolve the aforementioned problem, but do provide a measure of the *external*

Fig. 3.4 Mean Differences between Catalogue and MW268 Magnitudes by Section.

V Plates

(the lower quantity in each box is the number of stars compared in that section)

	2	3	4	5	6
B	-0.01 2	0.04 2		(0.84) 1	-0.32 1
C	0.15 1	0.10 2		0.18 2	
D	0.03 1	0.03 1			
E	0.06 15	0.07 4	0.02 2	-0.04 1	
F	-0.01 2		0.01 3	0.07 3	

B Plates

	2	3	4	5	6
B	-0.13 2	-0.03 2		(.72) 1	-0.11 1
C	0.14 1	0.08 2		0.05 2	
D	0.06 1	-0.07 1			
E	0.04 15	0.15 4	0.02 2	0.03 1	
F	-0.01 2		0.02 3	0.00 3	

U Plates

	2	3	4	5	6
B	-0.11 2	-0.07 2		(.29) 1	-0.25 1
C	0.19 1	0.02 2		-0.08 2	
D	0.07 1	0.15 1			
E	0.03 15	0.07 4	0.05 2	0.13 1	
F	-0.07 2		-0.01 3	-0.07 3	

uncertainty in the derived magnitudes. The mean differences, photoelectric minus photographic, are

$$\langle \Delta V \rangle = 0^m.07 \pm 0^m.05, \quad \langle \Delta(B-V) \rangle = -0^m.01 \pm 0^m.03,$$

$$\text{and} \quad \langle \Delta(U-B) \rangle = -0^m.01 \pm 0^m.07$$

which are less than the internal errors in the photographic measures.

Table 3.3 HD 76556 Sequence Cross-Reference & Comparison with Photographic Photometry					
No.	MW268 No.	ΔV (pe - pg)	Δ(B - V)	Δ(U - B)	Other ID
1	16006	0.05	0.01	0.01	HD 76556
2	16016	0.10	0.00	0.02	LS 1216
3	16007	0.13	-0.01	-0.01	HD 76535
4	16017	0.03	-0.01	-0.02	
5	16088	0.10	0.05	-0.16	LS 1215
6	16091	0.04	-0.05	-0.04	LS 1217
7	16092	0.16	-0.05	-0.05	
8	16090	0.02	-0.03	-0.02	
9	16079	0.05	-0.03	-0.08	
10	16100	0.07	-0.01	0.06	
11	16099	-0.03	0.00	0.13	
	mean	0.07	-0.01	-0.01	

Miller, E. W. and McCarthy, C. C. 1974 Astron. J. 79, 1294.

IV. The Interstellar Absorption

I investigated the run of interstellar absorption in MW268 by constructing a colour excess - corrected distance modulus diagram based on stars with full MK spectral classifications plus O3 to B6 stars without luminosity classes. Of the 1188 program stars with full classifications, 1167 were useful; the few stars excluded either lacked photometric magnitudes or were supergiants. (Absolute magnitudes for supergiants are too uncertain without subdividing the luminosity class which was not possible here.) 20 additional stars classified as O3 to B6 were included to help determine colour excesses beyond 1 kpc from the Sun. For this purpose they were assigned main-sequence luminosities. Absolute magnitudes and intrinsic colours are from Schmidt-Kaler (1982). Values for spectral types not in the tables were interpolated from between neighbouring values. (Star #21073 was excluded as its colour excess implied a clear error.) No other stars were discarded even though, through observational error, their individual colour-excesses are negative. I calculated individual colour excesses and grouped them into $0^m.3$ wide bins in *apparent* distance modulus and smoothed these with a three bin running average. The distance modulus of each bin was then corrected for extinction as follows,

$$(V_o - M_v)_{[bin]} = (V_{ap} - M_v)_{[bin]} - 3.2 * \langle E_{b-v} \rangle_{[bin]}$$

where $\langle E_{b-v} \rangle_{[bin]}$ is the average colour excess of the stars in that bin. (R_v = 3.2 was assumed throughout this project).

In the colour excess - corrected distance modulus diagram, these bins are skewed with a slope of -3.2 to avoid the "cut-off" problem (Reed 1983), a selection effect arising from the patchy nature of interstellar absorbing material. Consider, for example, two stars at the same distance but with one more heavily obscured than the other. If the apparently fainter star lies beyond the faint magnitude limit of the survey, it will not contribute to the mean colour-excess for that distance leading to an underestimate of the average absorption. The skewed bins parallel the apparent-magnitude limit eliminating this truncation problem. In addition, they reflect the motion of points in the E_{b-v} - (V_o-M_v) plane due to measurement errors (Burns *et al.* 1983).

Figure 4.1 shows the average colour excess of each bin versus its corrected distance modulus. The error bars are twice the *standard error* of the mean colour excess for each bin. The large cross in the upper left is the average *standard deviation* in the mean colour excesses. It reflects the scatter due to both observational error (classification & photometry) and the patchy nature of the interstellar medium. Note that since the bins are slanted (slope = $-R_v$) it is possible for more than one plotted point to be at a given corrected distance even though each bin is represented by a single value. The solid line is the adopted extinction relation:

$$
\begin{aligned}
E_{b-v} &= 0.00 & V_o-M_v < 5.27 & \quad (\quad r < 113 \text{ pc}),\\
&= 0.055(V_o-M_v) - 0.29 & 5.27 <= V_o-M_v < 9.64 & \quad (113 < r < 847 \text{ pc}),\\
&= 0.62(V_o-M_v) - 5.74 & 9.64 <= V_o-M_v < 10.98 & \quad (847 < r < 1570 \text{ pc}),\\
&= 1.07 & 10.98 <= V_o-M_v & \quad (\quad r > 1570 \text{ pc}).
\end{aligned}
$$

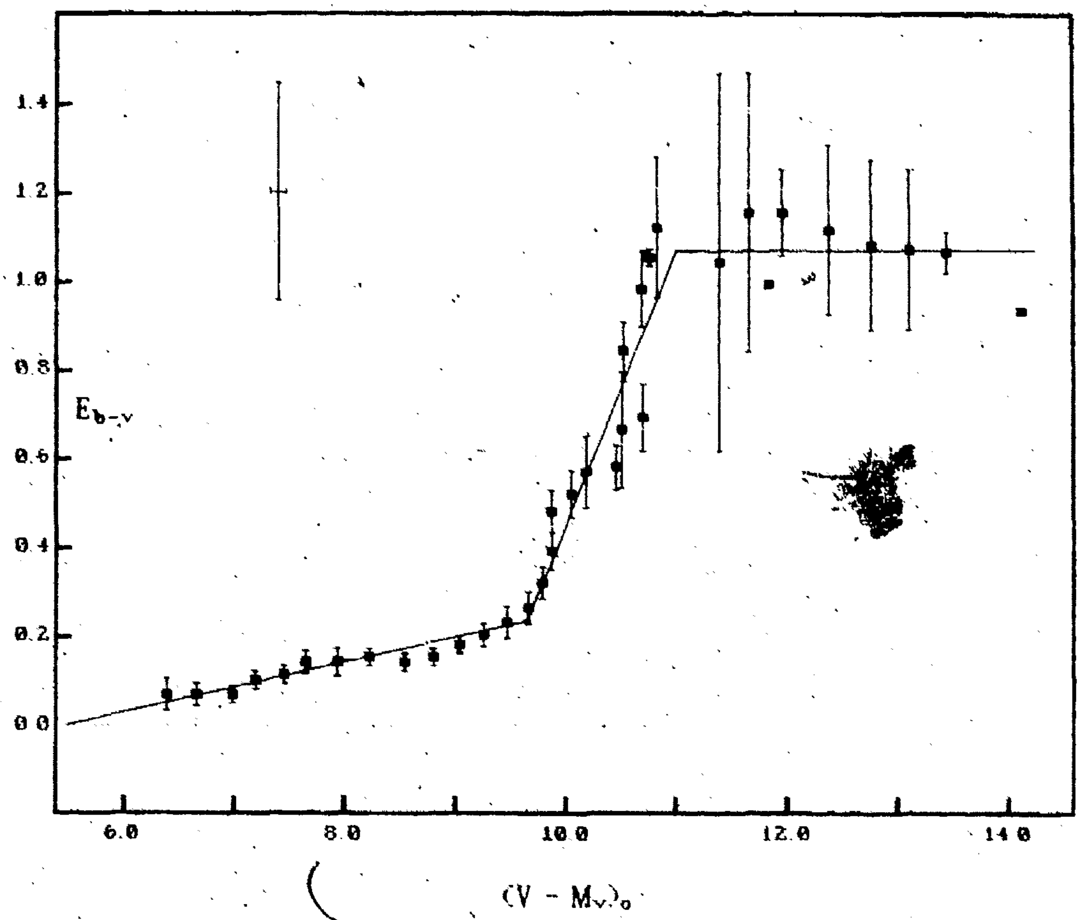

Fig. 4.1 Colour excess - distance modulus diagram for MW268. The error bars are twice the standard error of the mean. 1187 stars are binned in $0^m.3$ wide, skewed bins. The error cross in the uppper left corner is the average standard deviation over all the bins.

Foreground absorption out to 113 pc has been assumed negligible. The two segments between (V_o-M_v) = 5.27 and 10.98 were fitted by simple least-squares and the segment (V_o-M_v) > 10.98 is the mean colour excess in the that region.

A slight increase in the slope of the plotted points between 240 and 330 pc (6.9 < V_o-M_v < 7.6) indicates that there may be a cloud here. Heavy obscuration begins at 850 pc and continues until about 1350 pc resulting in a $\Delta E_{b-v} = 0^m.9$ ($\Delta A_v(r) = 2^m.9$). Within this region, the uneven increase in the colour excess suggests the possible presence of two clouds, one near 900 pc and the other at ~1200 pc. Beyond this point the data are sparse, but indicate no additional reddening material out to a distance of 5 kpc. As no external galaxies are evident on any of the direct plates (limit V ~16^m), there are likely additional absorbing clouds at yet greater distances.

In their study of the MW268 field, SF find a smoother increase in the colour excess with distance. They do find, however, indications of an extensive absorbing cloud centred about 1 kpc from the sun and a leveling off of the absorption by 2 kpc. Absorption runs similar to what I find here were also found at *l* = 268°, *b* = 1° (Neckel & Klare 1980) and at *l* = 277°, *b* = 0° (Moore & FitzGerald 1973). Eggen (1986) finds evidence for a cloud at about 500 pc and very large reddenings beyond 800 pc in the Vela "star sheet" (centred at *l* = 262° in the galactic plane).

V. The Space Densities of Common Stars and the Distribution of OB Stars

The derivation of space densities from spectrophotometric data assumes that every star within the field of study brighter than some magnitude limit has been accounted for. To find the completeness limit of the MW268 survey, I examined the variation of the general star count with increasing apparent magnitude. An empirical expression (due to von Seeliger) for the star counts A(m) per apparent magnitude interval is (Trumpler & Weaver 1962)

$$\log A(m) = s0 + s1 * m, \quad \text{where } s1 < 0.6$$

(s0 and s1 vary from field to field). Interstellar dust clouds and fluctuations in the stellar space density will cause deviations from a strictly linear relation. However, a general star count includes stars from a wide range in distance which smear out local effects. For the present purpose it suffices that a roughly linear relation is expected between log A(m) and m. Figure 5.1 shows the general star count in $0^m.25$ intervals for the MW268 field. The slope is roughly constant from $8^m.5$ to $12^m.5$ (s1 = 0.29) and falls off quickly thereafter. Although this is not conclusive evidence for a complete sample to $12^m.5$, it does support the claim.

Classifications for partially classified and unclassified stars were assigned by the statistical procedure of Reed (1983). This method uses the distribution of fully classified stars to determine a classification probability distribution for each partially or unclassified star. Program stars with full MK classifications are distributed in a three dimensional

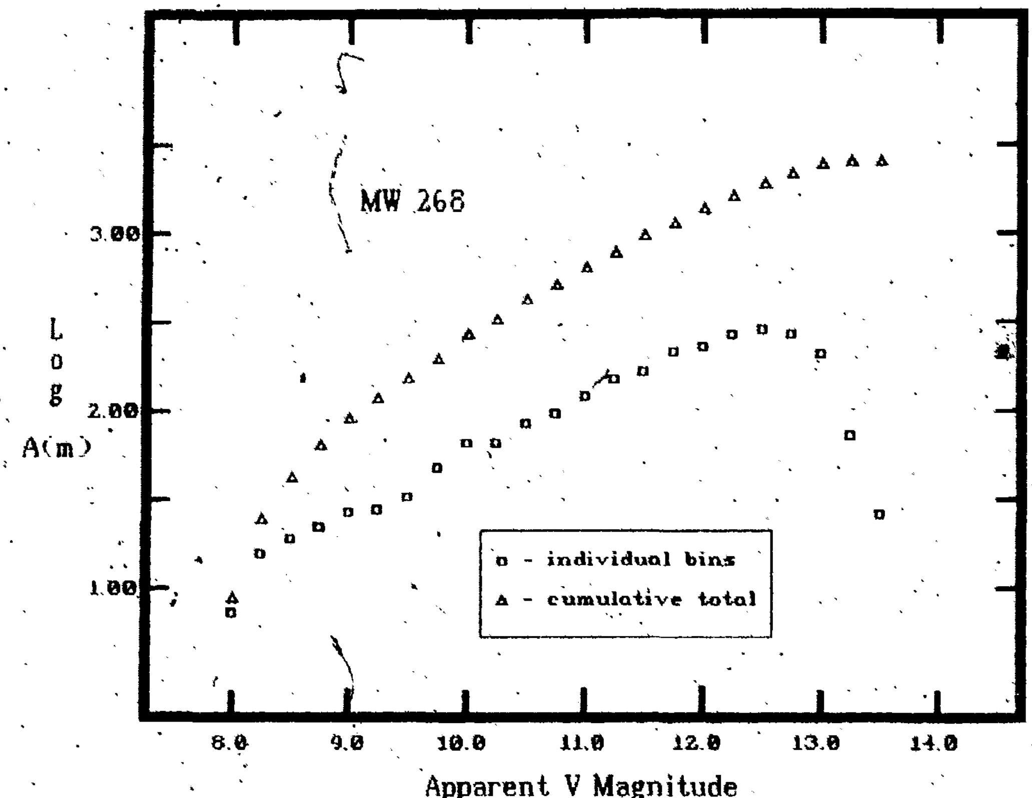

Fig. 5.1 The general star count A(m) in $0^m.25$ wide bins.

array of spectral type, luminosity class, and apparent magnitude. A partially classified star is added to the array (via an auxillary array so as not to disturb the statistical base) according to the normalized distribution of similar fully classified stars. For example, an 11th magnitude F2 star is fractionally assigned amongst the various luminosity classes according to the luminosity class distribution of fully classified 11th magnitude F2 stars. An unclassified star is fractionally distributed according to the distribution of all stars at the same apparent magnitude.

The star counts were extracted directly from the final distribution matrix, binned in $0^m.5$ intervals, and grouped by spectral class. Table 5.1 lists the adopted spectral groupings. These are identical to those used by Reed & FitzGerald (1984), which in turn were adapted from McCuskey (1967). This choice allows direct comparisons amongst the results from various galactic fields.

To strengthen the star count data at bright magnitudes, I included in the counts 1959 HD stars surrounding MW268. These were found by searching the Michigan Spectral Catalogue in a region bounded by $8^h 20^m.0 <= \text{R.A.} <= 9^h 40^m.0$ and $-42° <= \text{DEC.} <= -52°$ (146.09 square degrees). The photographic HD magnitudes were converted to V magnitudes by assuming that they are equivalent to B magnitudes and using the colour excess - distance modulus relation for MW268. The conversion formula is:

$$V_{app} = \left[\frac{1 + c_2 R_V}{1 + c_2 R_b}\right] \times \left[\, m_{pg} - M_v - (B - V)_o - c_1 R_b \,\right] + c_1 R_v + M_v ,$$

Table 5.1 Adopted Spectral Groups, Absolute Magnitudes and Dispersions

Spectral Group	Mv	σ
B7 - A0 III - V	+0.2	0.5
A1 - A6 III - V	+1.6	0.4
A7 - F6 III - V	+2.8	0.5
F7 - G3 IV - V	+4.5	0.4
G4 - G8 IV - V	+5.0	0.3
F5 - G7 III	+1.0	0.3
G7 - K6 III	+1.0	0.6
* F5 - K6 III	+1.0	0.5
B4 - B6 III - V	-1.0	0.5
K7 - M5 III	+0.0	0.6

* combined group employed in the present study

where $E_{b-v} = c_1 + c_2[\ V_o - M_v\ ]$ and $R_b = 1 + R_v = 4.2$ ($R_v = 3.2$). M_v and $(B-V)_o$ values are again from Schmidt-Kaler (1982). Stars listed as peculiar by Houk were counted but given only their letter class. For instance, stars classified as FmδDel became simply F stars. Partially classified stars were distributed amongst the fully classified stars as before.

Table 5.2 gives the star counts normalized to 100 square degrees along with the total star count for each spectral group. The dotted line separates the brighter HD counts from the fainter MW268 counts. This boundary was chosen to provide a reasonably smooth transition from one set to the other. (The HD counts showed signs of incompleteness by 9^{th}mag). Compared with previous B8-A0 counts in the same field, the MW268 counts are significantly lower between $8^m.0$ and $12^m.0$ (Stegman & FitzGerald 1972).

For each spectral group, space densities uncorrected for absorption effects were determined by solving m-log π tables with the iterative algorithm of Reed (1985). (Since the star counts are relatively small in both groups, the F5-G7 III and G8-K6 III stars were combined into one group for this calculation). This approach employs the general method of Lucy (1974) for solving inverse problems and respects the positivity of space densities and the uncertainties inherent in the star counts. A FORTRAN implementation for the St. Mary's VAX 11/780 was kindly supplied by Dr. B. C. Reed. Table 5.1 lists the parameters of the adopted Gaussian luminosity functions which are identical to those used in previous studies (McCuskey 1967, Reed & FitzGerald 1984). Simple

Table 5.2a Adopted Star Counts

[Stars / 100 sq. deg.]

App. V mag.	B7 - A0	A1 - A6	A7 - F6	F5-G7 III	G8-K6 III
5.50	3.42		0.68		
6.00	2.05		0.68		
6.50	1.37		0.68		
7.00	5.00	4.38	5.00		
7.50	15.23	14.79	14.46		32.74
8.00	36.98	21.64	19.22		41.07
8.50	69.58	36.01	25.48		67.96
9.00	140.03	74.14	24.71		57.66
9.50	109.07	117.46	46.07		78.80
10.00	131.80	189.46	164.74	16.47	145.52
10.50	200.81	276.11	227.71	35.94	109.48
11.00	243.78	358.45	405.29	140.99	96.35
11.50	350.34	280.11	737.42	197.03	105.91
12.00	477.02	357.26	1120.98	442.03	83.35
12.50	699.17	574.83	1139.05	306.96	223.02
N	485	383	532	138	225

The dotted lines separate the star counts from the Michigan Spectral Catalogue from the MW268 counts (fainter stars). MW268 counts cover 12.14 sq. degrees. HD counts cover 146.09 sq. degrees. N is the actual number of stars in each spectral group - MW268 + HD. F5-G7 III and G8-K6 III groups are combined for the density analysis.

Table 5.2b Adopted Star Counts [Stars / 100 sq. deg.]		
App. V mag.	F7-G3 V	G4-G8 V
6.50	0.68	
7.00	1.37	
7.50	3.42	
8.00	4.22	4.11
8.50	14.52	5.95
9.00	21.73	16.47
9.50	49.36	10.04
10.00	74.14	43.93
10.50	184.26	39.10
11.00	236.45	77.90
11.50	395.89	176.43
12.00	588.93	252.81
12.50	693.79	323.47
N	337	129

The dotted lines separate the star counts from the Michigan Spectral Catalogue from the MW268 counts (fainter stars). MW268 counts cover 12.14 sq. degrees. HD counts cover 146.09 sq. degrees. N is the actual number of stars in each spectral group - MW268 + HD.

Poisson counting errors were assumed for the input star counts. For those spectral groups without irregularities in the star counts, convergence occurs within a few iterations.

Real space densities were determined from the fictitious densities by correcting for the effects of interstellar absorption. In general, the fictitious density $\Delta(\rho)$ is related to the true density $D(r)$ by (Mihalas & Binney 1981)

$$D(r) = [(1 + 0.2\mu r \frac{da(r)}{dr}) \, 10^{0.6a(r)}] \, \Delta(\rho)$$

where $\mu = \ln 10$, and ρ is the apparent (uncorrected) distance.

The extinction in MW268 is well modelled by three relations of the form

$$a(r) = \alpha \log r + \beta .$$

In terms of colour excess and distance modulus this is equivalent to

$$E_{b-v} = c_1 + c_2(V_o - M_v),$$

$$\text{where} \quad \alpha = 5R_v c_2 , \quad \beta = R_v(c_1 - 5c_2).$$

Solving the general relation with this extinction equation leads to

$$D(r) = \left[(1 + 0.2\alpha) \exp \left[\frac{0.6\,\mu}{(1 + 0.2\alpha)} \{\beta + \log \rho\}\right]\right] \Delta(\rho).$$

Figure 5.2 displays graphically the space density runs for each spectral group. The error bars represent the propagated Poisson errors and the short dotted vertical lines mark the boundaries between the adopted extinction regimes. At these points, the extinction correction has a discontinous derivative which causes a discontinuity in the corrected density runs. Another adverse effect of the absorption

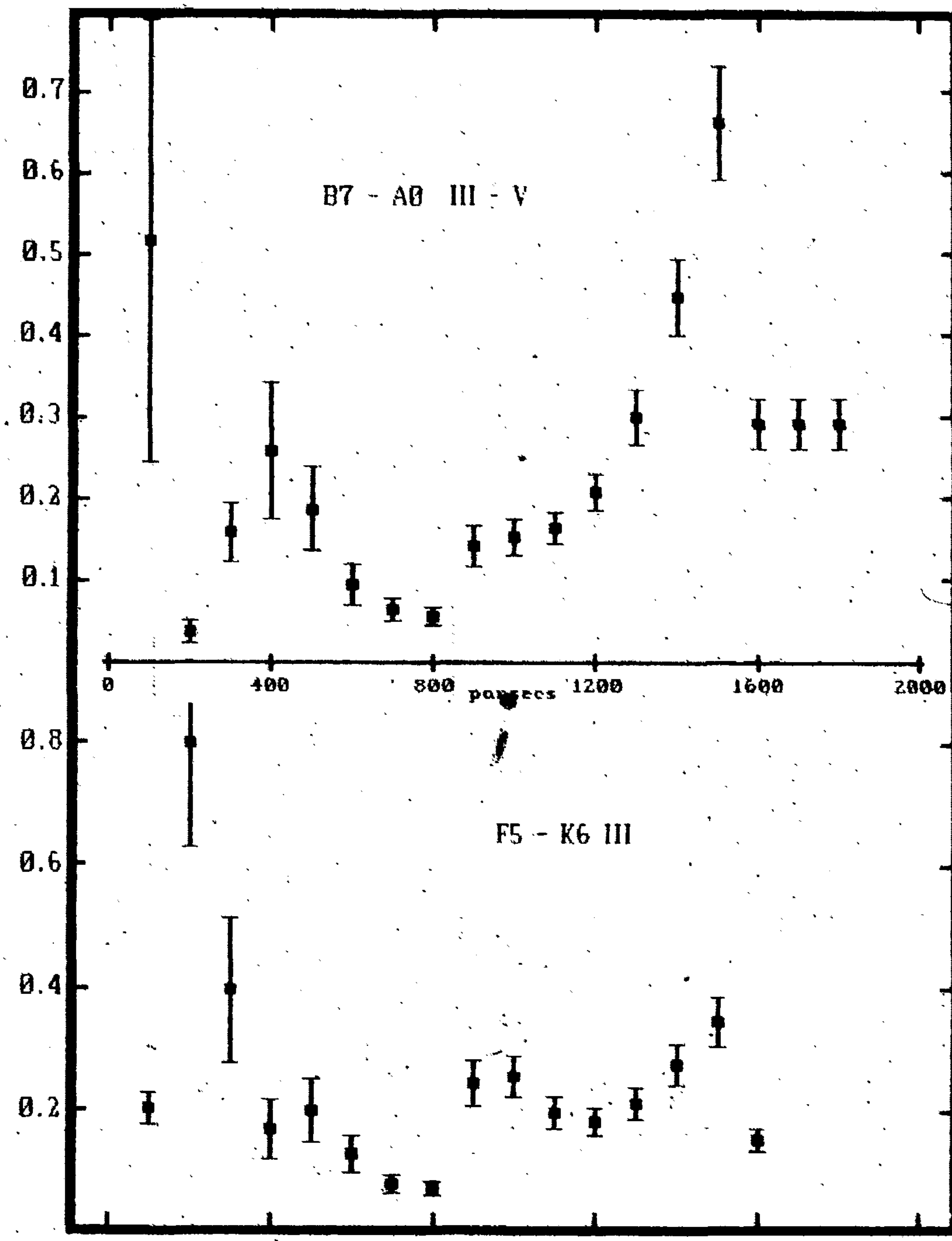

Fig. 5.2a The space densities of B7-A0 III-V and F5-K6 III stars in MW268. [no. stars / 10^3 pc]

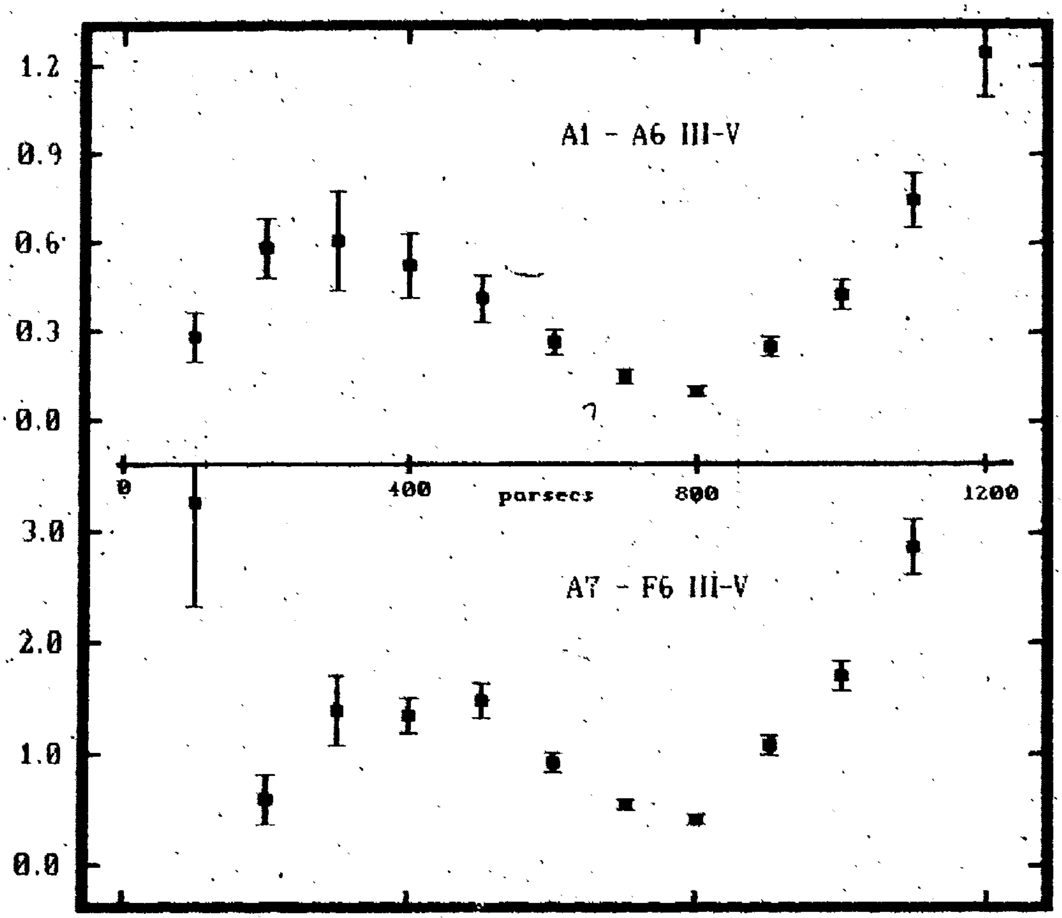

Fig. 5.2b The Space Densities of A and early F stars in MW268.
[no. stars / 10^3 pc]

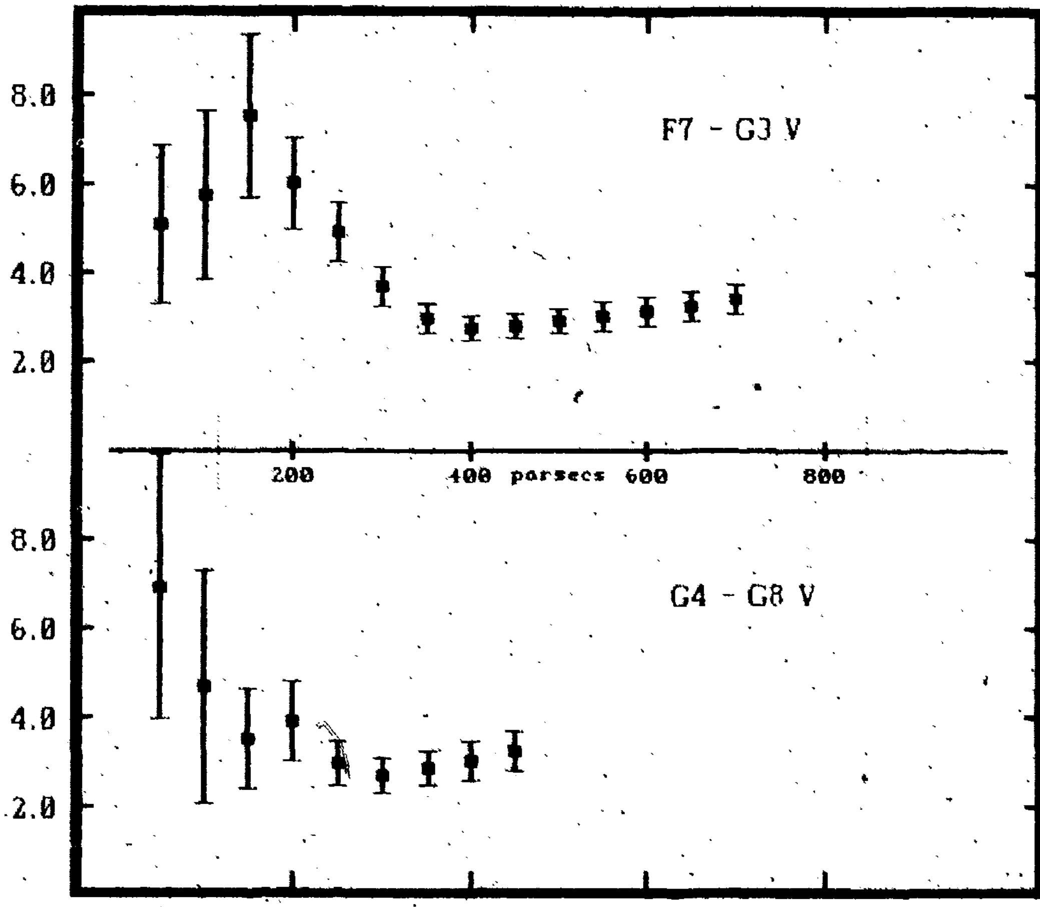

Fig. 5.2c Stellar space densities of G dwarfs in MW268.
[no. stars / 10^3 pc]

correction manifests itself in the density values at r = 1.4 and 1.5 kpc. In fig. 4.1 the plotted points suggest that the region of rapidly increasing reddening ends near $(V_o - M_v) = 10^m.65$ (1350 pc) whereas the adopted functional relation does not cease steeply increasing until $(V_o - M_v) = 10^m.98$ (1570 pc). Since the absorption correction depends on the derivative da(r)/dr as well as the total absorption a(r), this overshoot leads to invalid corrections within these distances. Table 5.3 tabulates the final density results interpolated from the computed output at fixed distance intervals. The horizontal line in each column separates the densities dominated by the HD star counts (closer to the sun) from those based on the MW268 counts.

There are too few early type stars in MW268 to permit a statistical analysis of their space densities. Instead, their distribution must be based on spectrophotometric distance estimates to individual stars. Unfortunately, the quality of the observational data gathered in MW268 is only mediocre when applied in this manner. Nonetheless, OB stars are recognized as an important tracer of galactic features and at least a preliminary analysis is warranted here.

56 stars with spectral types of B6 or earlier are shown in fig. 5.3 plotted in an apparent distance modulus — colour excess diagram. These are all the MW268 stars in this spectral range with luminosity classes plus those without assigned luminosity classes which are assumed, for this purpose, to be main-sequence stars. If some of these stars are members of an association subjected to varying amounts of reddening due to intervening absorption, then in this diagram they will lie along a

Table 5.3a Interpolated Star Densities
Stars per 1000 cubic parsecs

R [pc]	B7 - A0	A1 - A6	A7 - F6	F5-K6 III
100	0.517	0.280	3.27	0.205
200	0.036	0.583	0.60	0.802
300	0.158	0.610	1.41	0.396
400	0.257	0.524	1.35	0.171
500	0.186	0.413	1.49	0.199
600	0.094	0.265	0.94	0.129
700	0.065	0.149	0.56	0.083
800	0.055	0.098	0.41	0.073
900	0.142	0.253	1.08	0.246
1000	0.152	0.426	1.72	0.257
1100	0.163	0.741	2.87	0.195
1200	0.207	1.241		0.181
1300	0.299			0.210
1400	0.446			0.275
1500	0.662			0.343
1600	0.292			0.153
1700	0.292			
1800	0.292			

The dotted line separates the densities dominated by the HD star counts (closer to the Sun) from those based on the MW268 counts.

Table 5.3b Interpolated Star Densities
Stars per 1000 cubic parsecs

R [pc]	F7-G3 V	G4-G8 V
50	5.13	6.96
100	5.75	4.70
150	7.56	3.57
200	6.07	3.96
250	4.97	3.03
300	3.72	2.71
350	3.00	2.86
400	2.80	3.06
450	2.82	3.26
500	2.92	
550	3.04	
600	3.17	
650	3.29	
700	3.43	

The dotted line separates the densities dominated by the HD star counts (closer to the Sun) from those based on the MW268 counts.

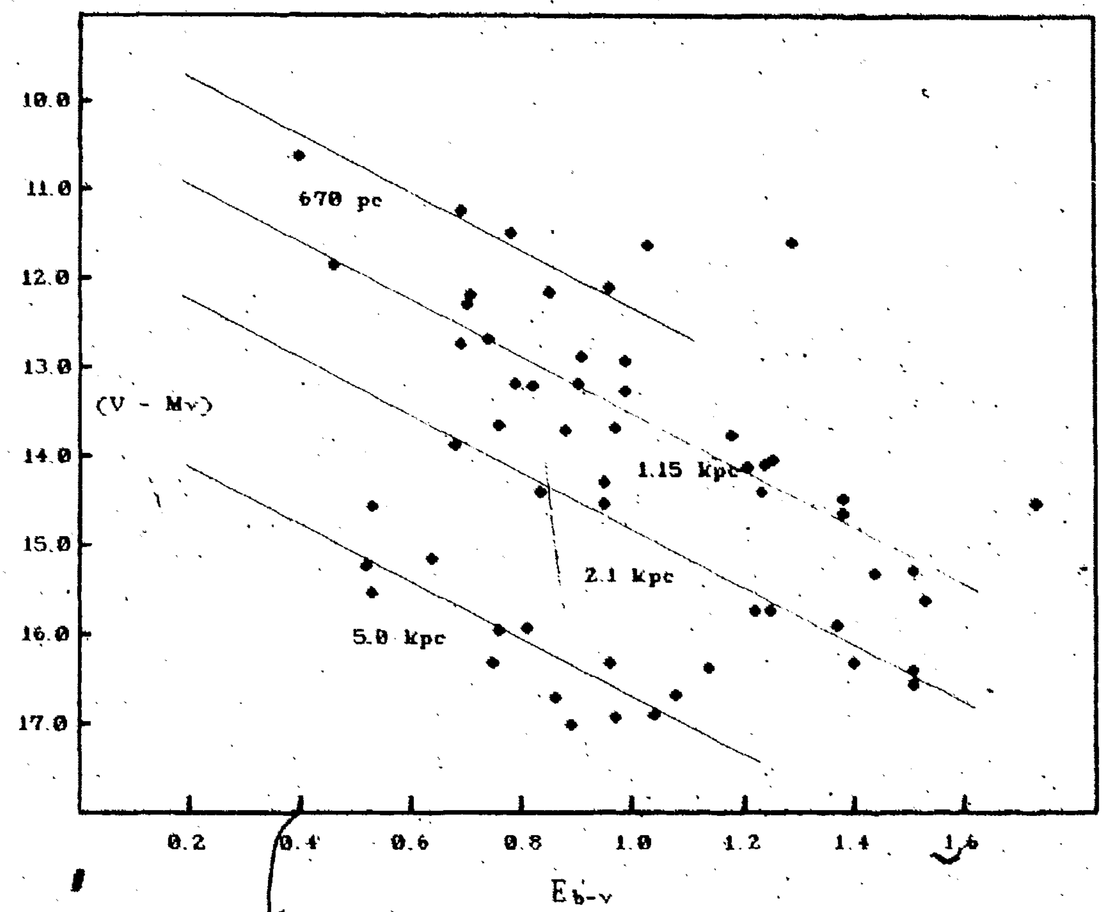

Fig. 5.3 Variable extinction diagram of the MW268 O-B6 stars. Points lying on the straight lines are at the same true distance modulus. Four associations are evident - at 670 pc, 1.15 kpc, 2.1 kpc, and 5.0 kpc.

line represented by the relation

$$(V - M_v)_{app} = R_v * E_{b-v} + (V_o - M_v)$$

where the slope R_v is the ratio of total to selective absorption. Three associations can be readily identified in fig. 5.3 lying at distances of 1.15 kpc, 2.1 kpc, and 5.0 kpc, and perhaps a 4th is at 670 pc. The constant distance modulus lines drawn in fig. 5.3 were fit to each association by a simple least-squares procedure and then refit using a common value for R_v. The weighted average value for R_v inferred from separate fits is $\langle R_v \rangle = 3.2$, and since most of the extinction arises in one region, this value was used in deriving the distance moduli. Table 5.4 lists the potential members in each association.

Before discussing the results, it is worthwhile to consider a selection effect arising in any magnitude limited sample known as Malmquist's bias. For a class of objects observed in a particular apparent magnitude interval, the volume of space occupied by the intrinsically more luminous members is larger than that for the fainter ones. Consequently, the average absolute magnitude of the observed objects will be biased towards brighter values than the same average for that class of objects in a fixed volume of space. Since there is a spread in the intrinsic luminosities amongst the stars in the spectral groups adopted for this project, the Malmquist bias is expected to be non-zero. The difference between the average luminosity of stars in an apparent magnitude bin $\langle M(m) \rangle$ and the mean luminosity of the stars in a given volume M_o is (Mihalas a Binney 1981):

$$\langle M(m) \rangle - M_o = -\mu\sigma^2 \, d(\log A(m,S))/dm$$

Table 5.4 Tentative membership in MW268 OB associations

5.0 kpc	11043 (O7), 16003 (B0III), 16007 (B3Ia), 16049 (O9), 16088 (O9I), 21014 (O9), 21019 (B0), 21029 (B0), 21030 (B2III), 21034 (B0V), 21056 (B2III), 21070 (B5), 21074 (O8V), 21075 (B0V).
2.1 kpc	3003 (O9), 3062 (B5V), 6014 (O7I), 7059 (O8V), 8024 (B0V), 8028 (O8V), 11007 (O8I), 13037 (B2), 14042 (O9), 16016 (B1Ia), 16041 (B2V), 23027 (O9), 23030 (O8).
1.15 kpc	3022 (B5V), 5070 (B3), 6026 (O9), 9003 (B6V), 9005 (B1III), 9057 (B5), 11019 (B2), 12051 (B4V), 14046 (O9V), 16006 (B0V), 18013 (O9V), 18020 (B2V), 19004 (B2IV), 19044 (B3V), 19052 (B0V), 20047 (B1), 21010 (B1), 22025 (B3V), 23016 (B1III), 24040 (B6V), 24043 (B2).
670 pc	6041 (B1), 12001 (B2V), 12011 (B4V), 14005 (B6V), 21051 (B5V), 21058 (B5V).
Vela Sheet ? ~360 pc	7019 (B2V), 12008 (B1V), 15007 (B4V), 18003 (B4V).

where A(m,S) is the star count for stars in spectral group S at apparent magnitude m, σ the dispersion of the luminosity function for group S, and $\mu = \ln 10$. For typical values of $\sigma = 0^m.5$ and $\Delta \log A(m,S)/\Delta m = 0.29$, $\langle M(m) \rangle - M_o = -0^m.17$, implying a systematic error in the absolute densities by a factor of $10^{0.6(M_o - \langle M(m) \rangle)} = 1.26$, independent of distance. However, changing the mean luminosity of a spectral group by $0^m.17$, also alters the space densities by the *same factor*. Current uncertainties in absolute magnitude calibrations are of the order of the present bias, rendering it only marginally significant (cf. Schmidt-Kaler 1982, Corbally & Garrison 1984 and Grenier et al. 1985). I have not applied any correction to my results since this has not been the practice in the past.

VI. Discussion

Some caution is necessary when attempting to draw conclusions from space density analyses. As indicated previously, the absolute densities are subject to some uncertainty largely resulting from uncertainties in the luminosity functions. As well, the relative density values depend on the accuracy of the absorption corrections. This problem becomes important in MW268 within and beyond the region of high obscuration. Indeed, the far boundary of this region is not well defined and this has a severe effect on the derived densities at some distances. An additional difficulty arises from the low star counts (hence, relatively large Poisson errors) near the sun due to the small volumes of space sampled. Inverting the fundamental equation with noisy data can produce large fluctuations in the solutions; any variations in the densities at less than a few hundred parsecs from the sun should be suspect. Nevertheless, some general trends can be inferred from the results.

<u>The Common Stars:</u> (note: all stellar densities are expressed as the number of stars per 1000 cubic parsecs)

B7-A0 III-V Stars: The space density of the B7-A0 stars rises to a peak at 400 pc of 0.26 stars per 10^3 pc^3, dropping to 0.06 at 800 pc, and then increasing to 0.29 at 1500 pc and remaining constant to the limit of the survey at 1800 pc. The large values computed at 1400 and 1500 parsecs (fig. 5.2a) are likely artefacts of the extinction correction and should not be considered valid. The correction does not reproduce the far boundary of the dust cloud adequately and thus the computed densities in that region cannot be considered correct.

A density ridge or overabundance of B7-A0 stars in the galactic plane 400 pc distant is a well observed feature in this region. At l = 245° the density peaks 500 pc from the sun at 0.15 stars per 10^3 pc^3 (Reed & FitzGerald 1983). In a large field centred at l = 262° the enhanced concentration, 0.17 stars per 10^3 pc^3 between 350 and 450 pc from the sun, has been recently studied (Eggen 1986). In and near MW268, densities of 0.3 and 0.4 (for B8-A3 stars) have been previously reported 500 pc from the sun (Stegman & FitzGerald 1972, McCuskey & Lee 1976). At l = 277°, 0.25 stars per 10^3 pc^3 are located at 300-600 pc and a concentration at 600 pc is reported at l = 280° (Moore & FitzGerald 1973, Wooden 1971).

The density depression at 800 pc is also generally observed, but the increasing densities beyond are not. Stellar densities of 0.07-0.08 stars per 10^3 pc^3 are observed at l = 245°, 277°, & 280°. However, neither study near MW268 reports such a low value. Stegman & FitzGerald (1972) actually find a peak at 800 pc, although this is followed by a sharp drop at 900 pc (0.32 to 0.15 stars per 10^3 pc^3). Increases in density at 1 kpc are observed at l = 268° and 277°, but not at l = 245° or 280°.

A1-A6 / A7-F6 III-V stars: Qualitatively the space density variations along the line of sight for both these spectral groups are remarkably similar - see fig. 5.2b. The density of early A stars declines from 0.6

stars per 10^3 pc^3 at 300 pc to a minimum density of 0.1 at 800 pc and then increases rapidly to over 1.2 at 1200 pc. Similarly, the density of late-A and F stars declines from 1.4 stars per 10^3 pc^3 between 300 and 500 pc to a minimum at 800 pc of 0.4, and then increasing to over 2.8 at 1100 pc.

The distribution of early A and later type stars in this direction has not been investigated as widely as the more luminous, earlier stars. At l = 245°, the A1-A6 stars decline in density from 0.8 stars per 10^3 pc^3 at 200 pc to a minimum of 0.15 at 700 pc, but then only increase slightly to 0.25 stars per 10^3 pc^3 at 1200 pc. The A7-F6 stars in this field rapidly decline from 2.6 to 1.0 stars per 10^3 pc^3 between 200 and 500 pc (Reed & FitzGerald 1983). The same spectral groups at l = 280° exhibit relatively small variations with average densities of 0.25 & 0.7 stars per 10^3 pc^3 respectively, but both groups do show some concentration near 600 pc (Wooden 1971).

F5-K6 III stars: The space densities of the yellow-orange giants follow the same trends as the previous groups. From 0.2 stars per 10^3 pc^3 at 500 pc their density decreases to 0.07 at 800 pc and then increases to 0.2 near 1200 pc. The computed values at 1400 and 1500 pc should be disregarded as argued before.

The average density of giant stars in MW268 is typical for giants in other Galctic plane fields (McCuskey 1965), but less than the high densities found at l = 245° (Reed & FitzGerald 1983). At l = 280°, the giants concentrate at 600 pc with a density near 0.4 stars per 10^3 pc^3, and monotonically decrease in density thereafter (Wooden 1971).

F7-G8 V stars: The G-dwarfs exhibit essentially uniform space densities of 3.0 stars per 10^3 pc^3 within a few hundred parsecs of the sun. Interestingly, there is no suggestion of decreasing densities beyond 500 pc.

The uniform densities found in MW268 are very similar in both magnitude and character with those found at many other longitudes (McCuskey 1965). However, both at l = 245° and l = 280° larger densities of about 5.0 stars per 10^3 pc^3 are found within a few hundred pc of the sun (Reed & FitzGerald 1983, Wooden 1971).

<u>The OB stars:</u>

Three distinct associations of early-type stars are found in MW268. The closest group lies at 1.15 kpc, another at 2.1 kpc and the final group at 5.0 kpc. A fourth association may reside at 670 pc, although this group contains only a few B stars. The associations at 1.15 and 2.1 kpc have both been previously identified; although their designations are confused (Miller 1972 - Vel OB1 at 1.1 kpc and Humphreys 1978 - Vel OB1 at 1.8 kpc). A concentration of B4-B5 stars 700 pc from the sun had been previously noted in MW268, and the group at 670 pc confirms this (Stegman & FitzGerald 1972). Between the associations at 2 and 5 kpc there are apparently few if any OB stars.

The association at 5.0 kpc may be indicative of a further spiral feature lying in the Puppis-Vela part of the Galaxy. Several other OB associations may help define this feature. Pup OB2, part of an extension of the Local Arm at $l = 245°$, is about 4.7 kpc distant (Havlen 1976, Turner 1981). At $l = 265°.2$, $b = -2°.0$ the young cluster Bo 7 is located ~5.8 kpc from the sun (Vogt & Moffat 1975). Vel OB3 consists of 6 faint O-B2 stars within one square minute centred at $l = 275°$ $b = -1°.9$ some 5-6 kpc distant (Miller 1972). Considering the uncertainties in distance estimates, these 4 associations are at similar distances and may trace out a distant spiral feature branching from the Local Arm and reaching towards the Carina region.

Conclusions:

An examination of figs. 5.2 reveals a general trend in the space density variations in MW268 within 1 kpc of the sun. There is an enhancement at 400 pc followed by a minimum near 800 pc evident in all the groups. The generality of this feature is clearly shown in fig. 6.1. The density runs for each spectral group normalized to their average value along the line-of-sight (mean density = 1.00) are plotted together with the same ordinate. Moreover, the relative variations are similar among the groups.

The feature observed 400 pc from the sun is strongly supported both by the present study and previous studies. It is ubiquitous amongst the spectral groups studied here. At $l = 280°$ a similar common density peak at 600 pc is observed for spectral types from B7 to F6 and for the giants (Wooden 1971). This "ridge" coincides with the Vela

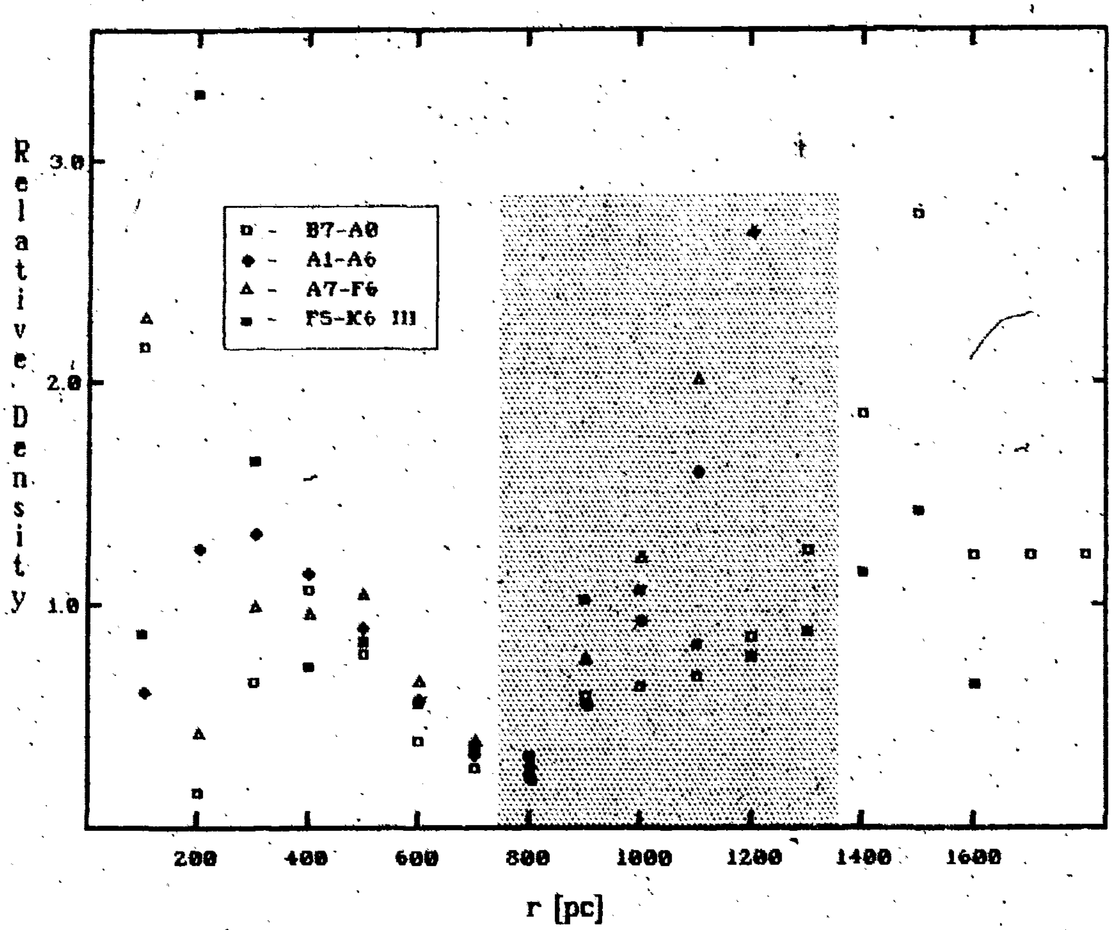

Fig. 6.1 The relative space densities of 4 spectral groups in MW268. 1.00 = the average density for each group along the line-of-sight. The shaded area corresponds to the approximate extent of the dust cloud.

"Sheet" and is likely also associated with the Vela SNR and the Gum nebula (Brandt *et al.* 1971, Eggen 1986). Likewise, the "trough" with its minimum 800 pc from the sun is evident in all the spectral groups and represents the same relative density decline to ~30% of the mean density.

*

A general decline in stellar space densities, particularly amongst the A & F stars, is a long standing feature in the solar neighbourhood. Bok (1937) noted that no reasonable treatment of the interstellar absorption could reverse the trend. McCuskey's (1965) results over a wide range in galactic longitude yield the same general trends. Herbst & Sawyer (1981), employing general star counts and a somewhat different analysis technique, also arrived at the same conclusion. The sun appears to be near the centre of a *not* necessarily spherical region of enhanced star densities. The lack of stars in MW268 800 pc from the sun may be evidence of this phenomenon though the concentration of stars near 400 pc adds another component to the local galactic structure.

The dust cloud, the region of high absorption noted before, begins near the minimum of the density depression and extends for another 500-600 pc. Within this region, the densities of all spectral groups increase: the most populous OB association is located near the centre (~1.15 kpc); the B7-A0 stars and the giants attain densities similar to those in the 400 pc feature; and the A & F stars show a strong concentration towards the far edge of the cloud rising to nearly double their respective densities at 400 pc. This latter group suggests an extended region of star formation may be present particularly if the observed CO emission (Dame *et al.* 1987), indicating the presence of molecular hydrogen, arises here. Overall, the region between 800 and 1400 pc has some characteristics of a cross-section through a spiral density-wave feature.

Galactic structure in the Vela region is quite complex. The present study points out variations in the stellar space densities which are shared from spectral types B8 to F6 and by the giants. The Vela Sheet appears as a clearly defined density enhancement 400 pc from the sun followed by first a zone of low stellar densities and then the Pup-Vel spur, a region of enhancement near 1 kpc. An extensive dust cloud is associated with the latter as well as Vel OB1. Two more OB associations are found at 2.1 kpc and 5.0 kpc, with the region between these being essentially devoid of either early-type stars or dust. Further investigation of the structure in this part of the Galaxy is warranted, particularly with regard to the OB stars.

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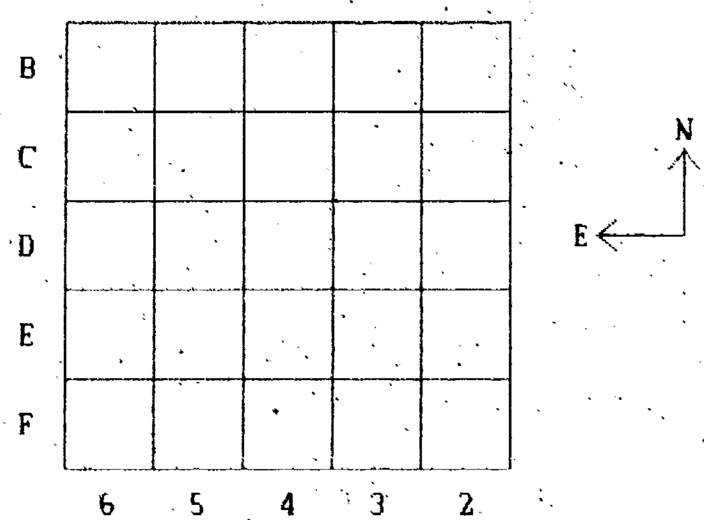
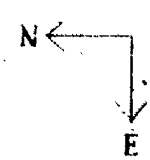
Appendix A

MW268 Finding Charts

Field centre: R.A. 9 04 , DEC. -47 (J2000.0)

Scale: ~17.3" / mm





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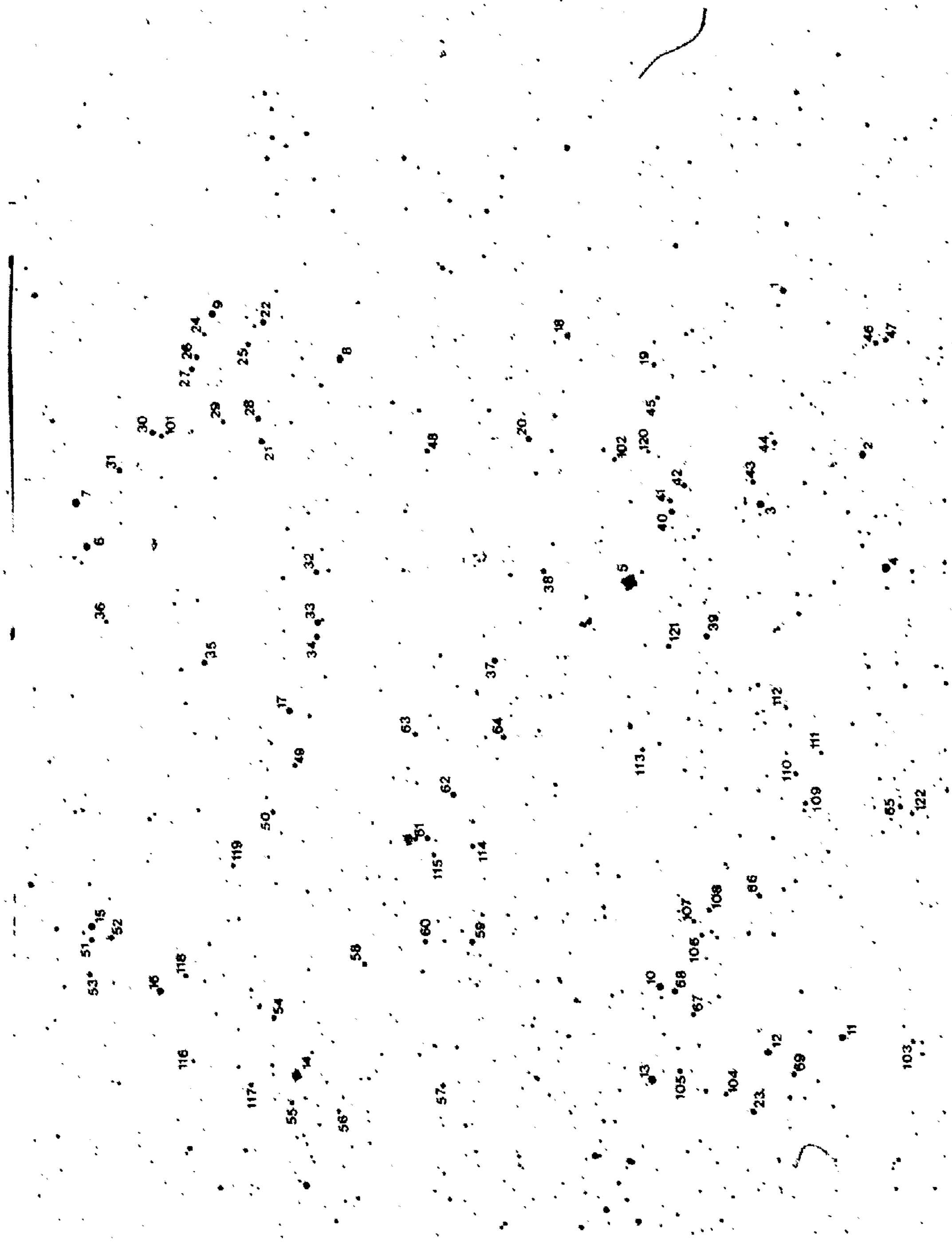

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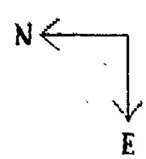

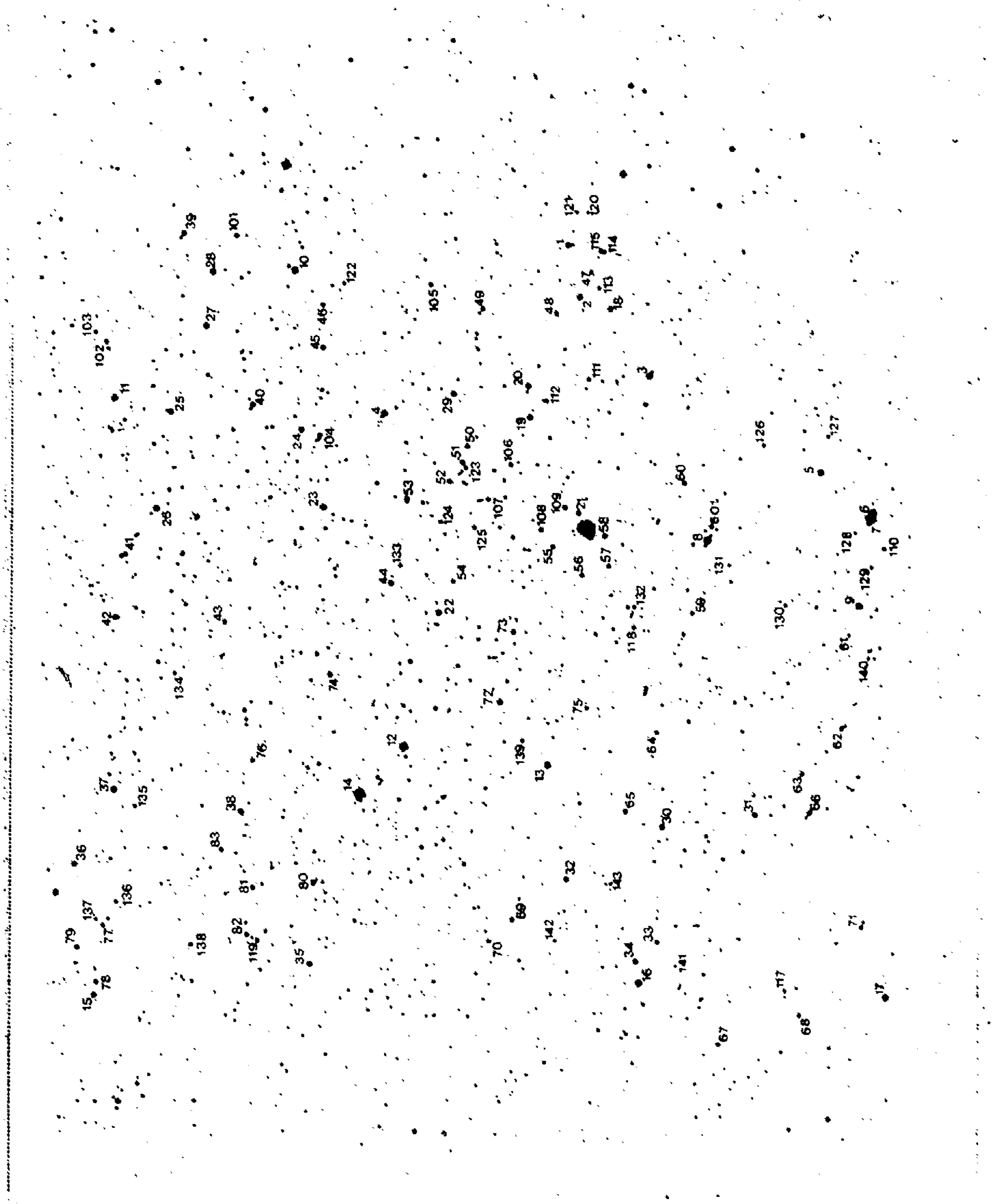

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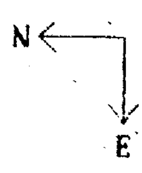

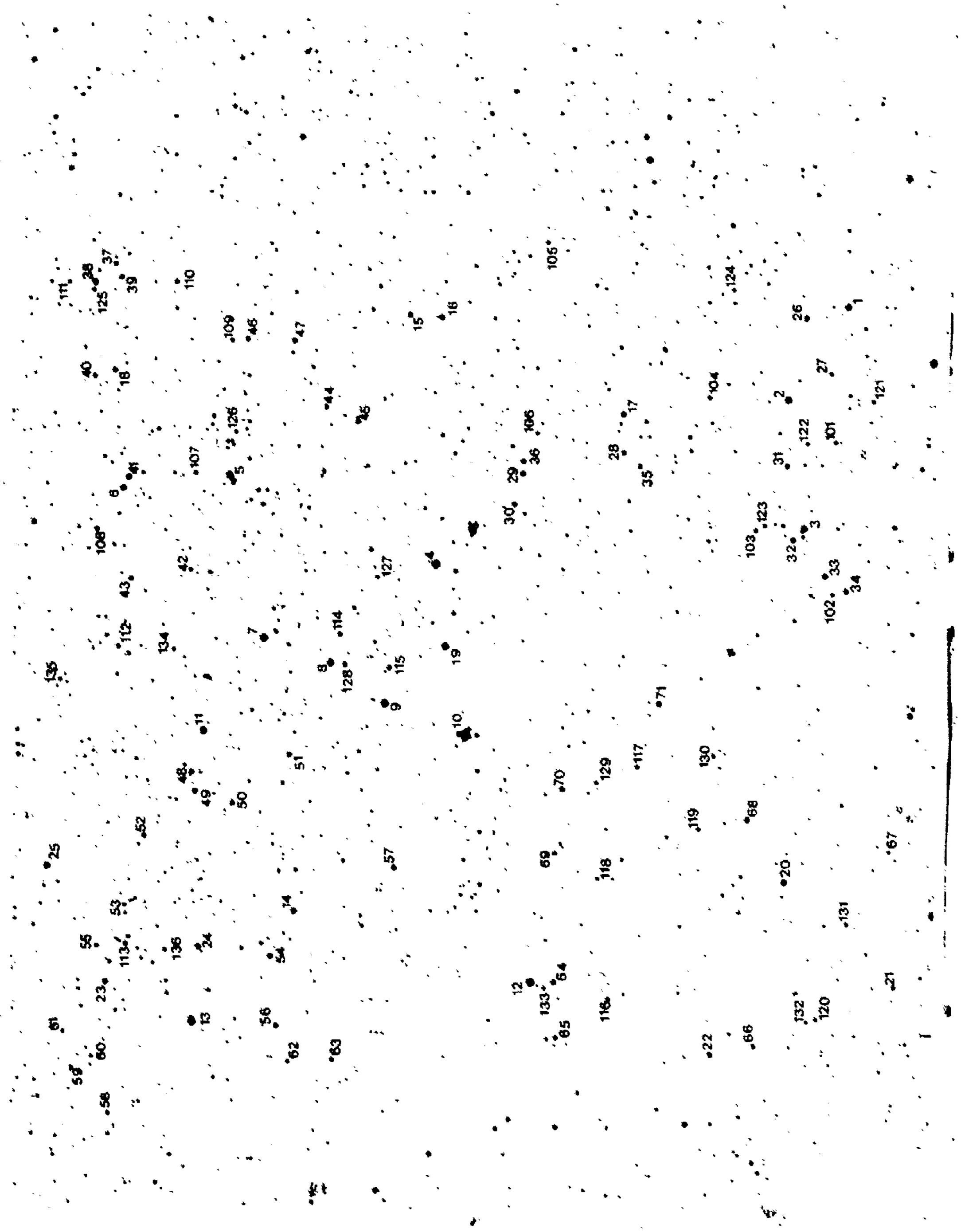

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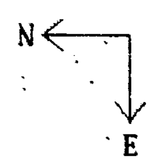

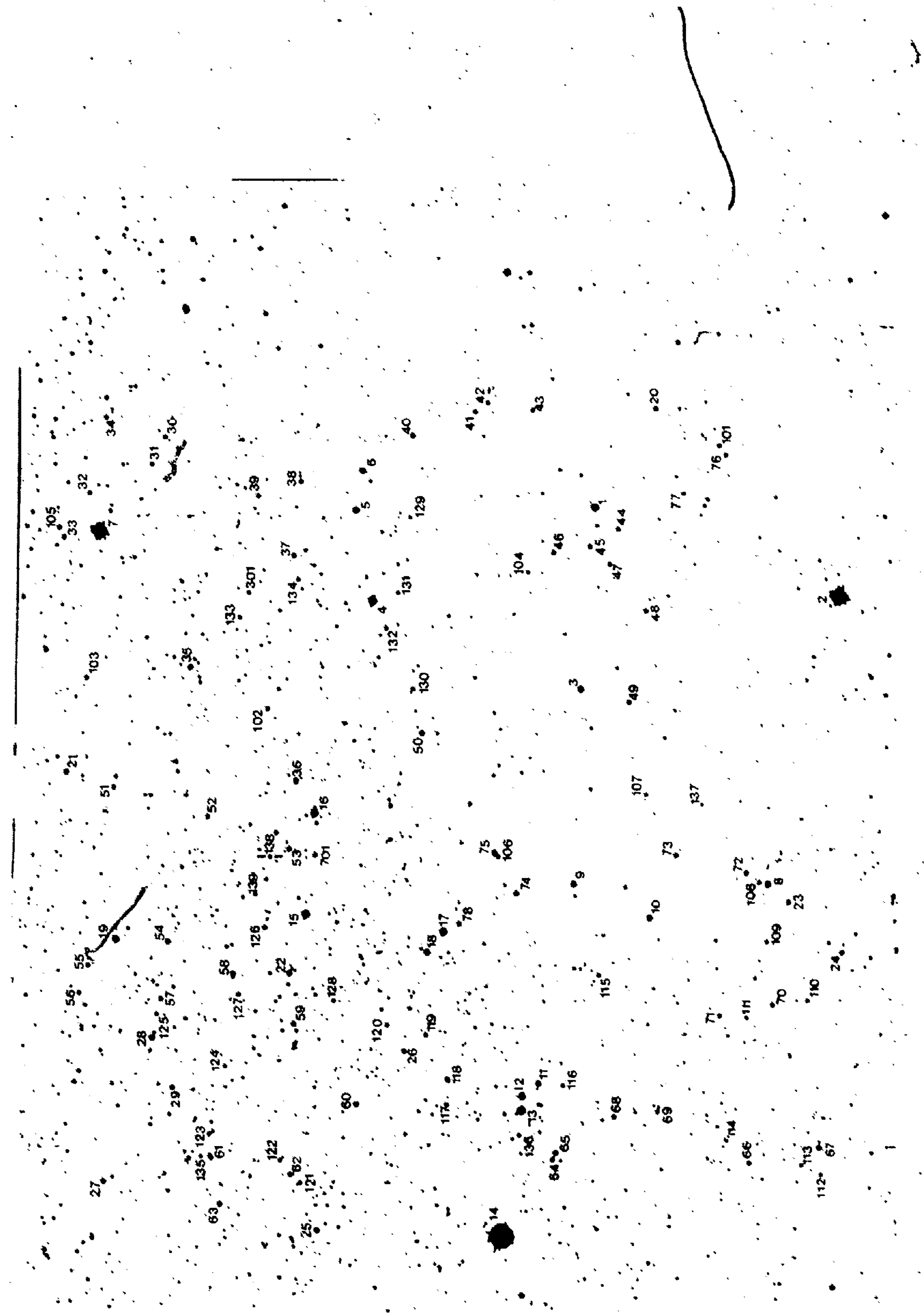

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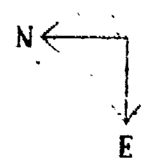

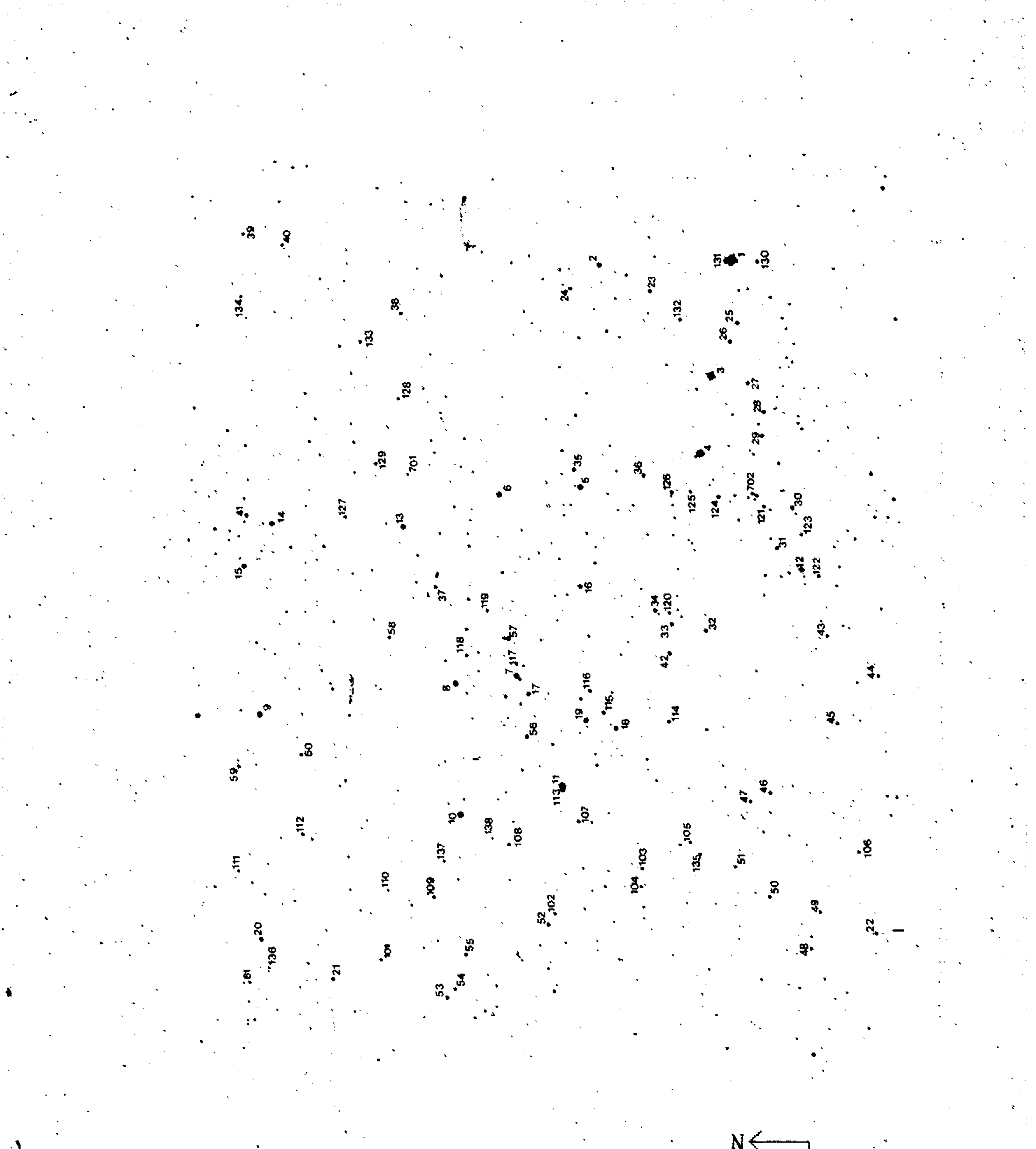

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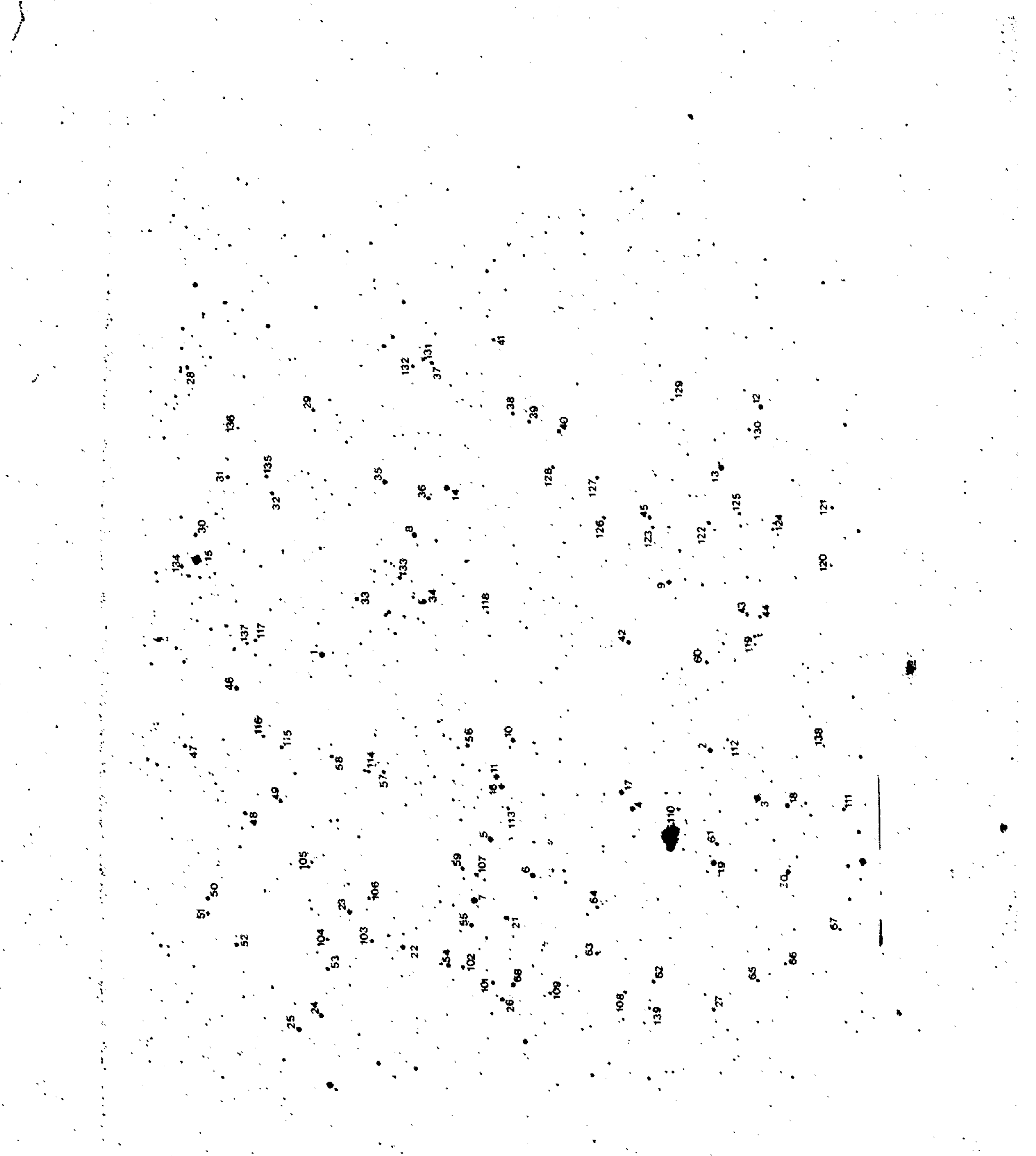

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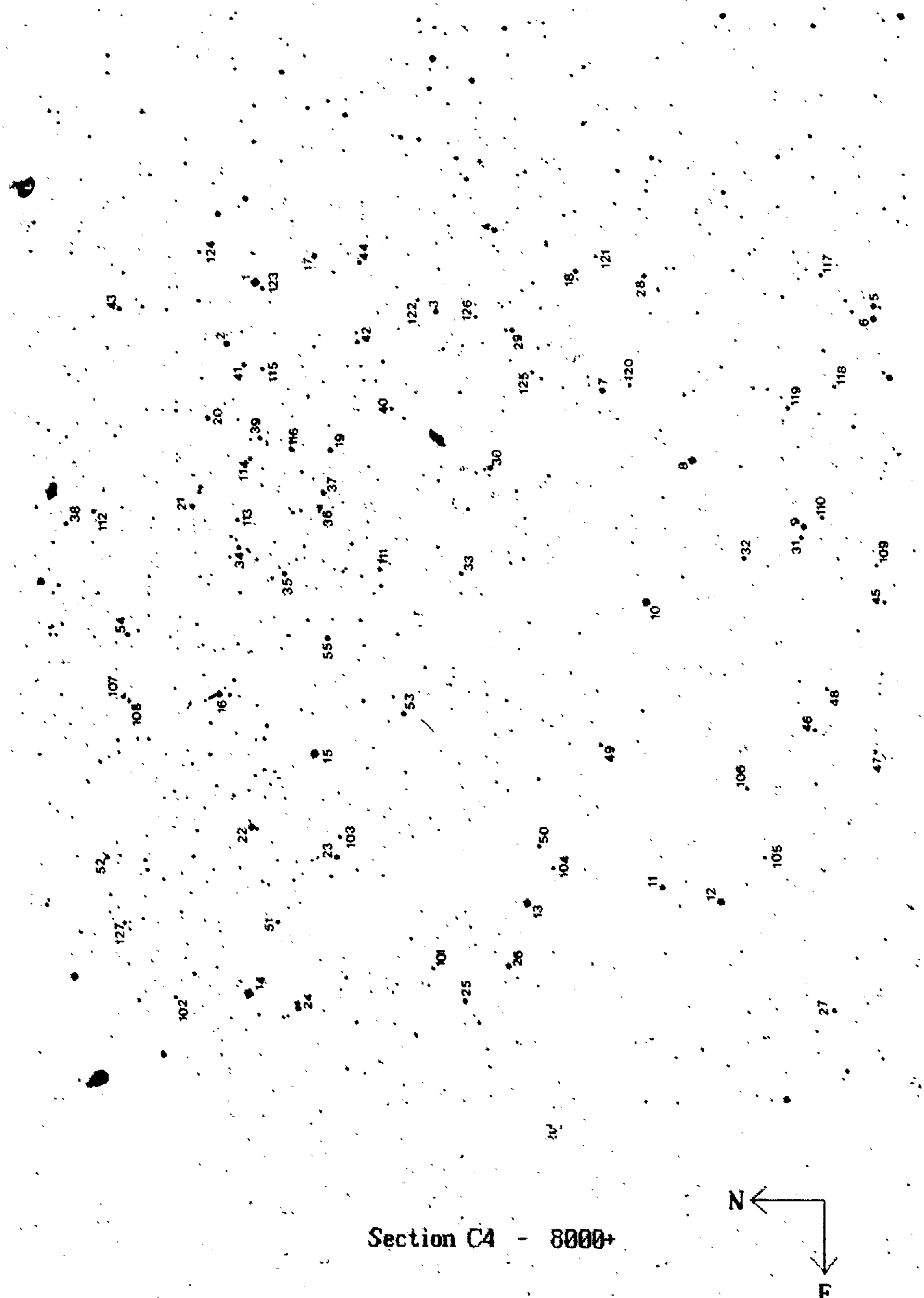

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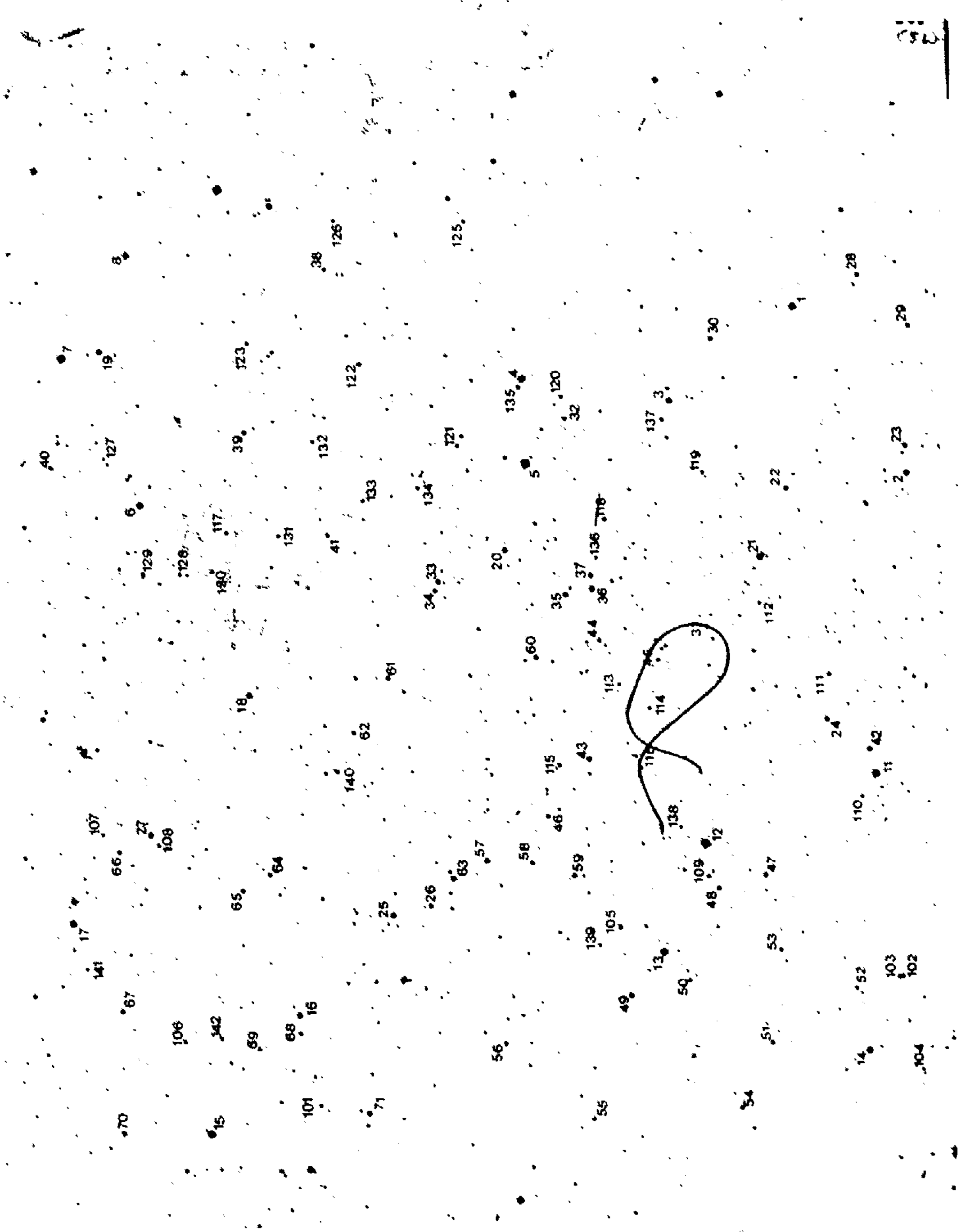

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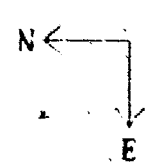

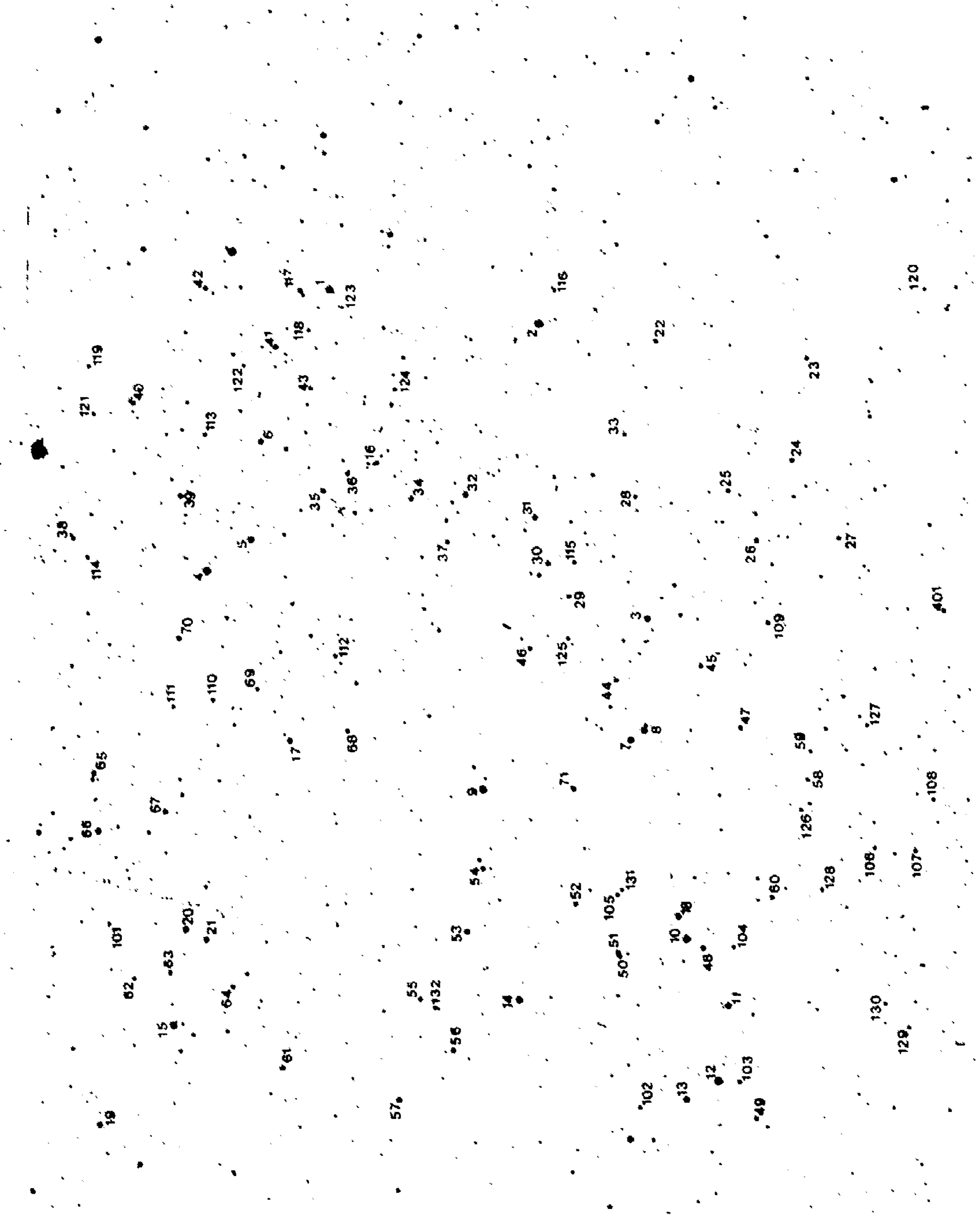

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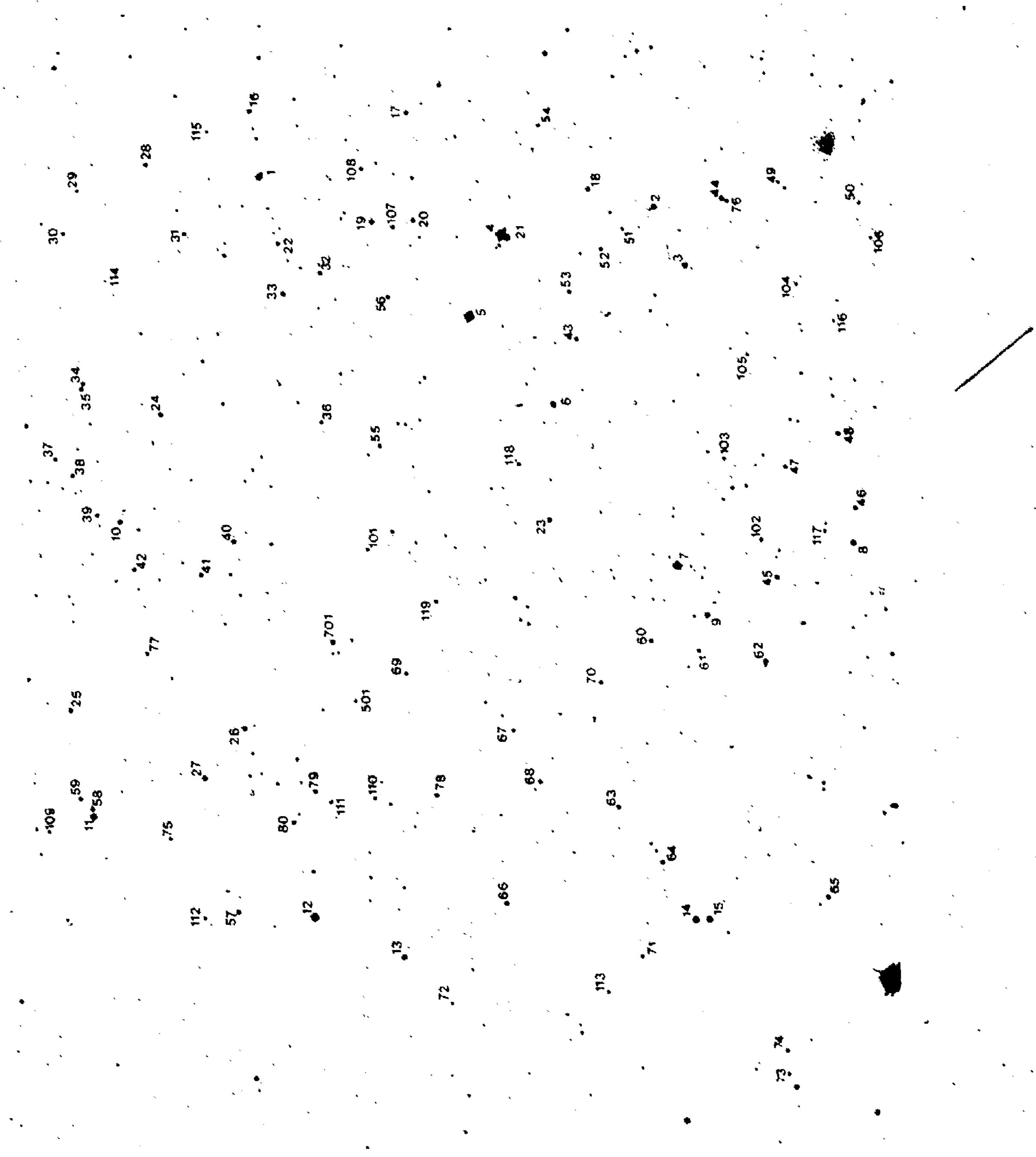

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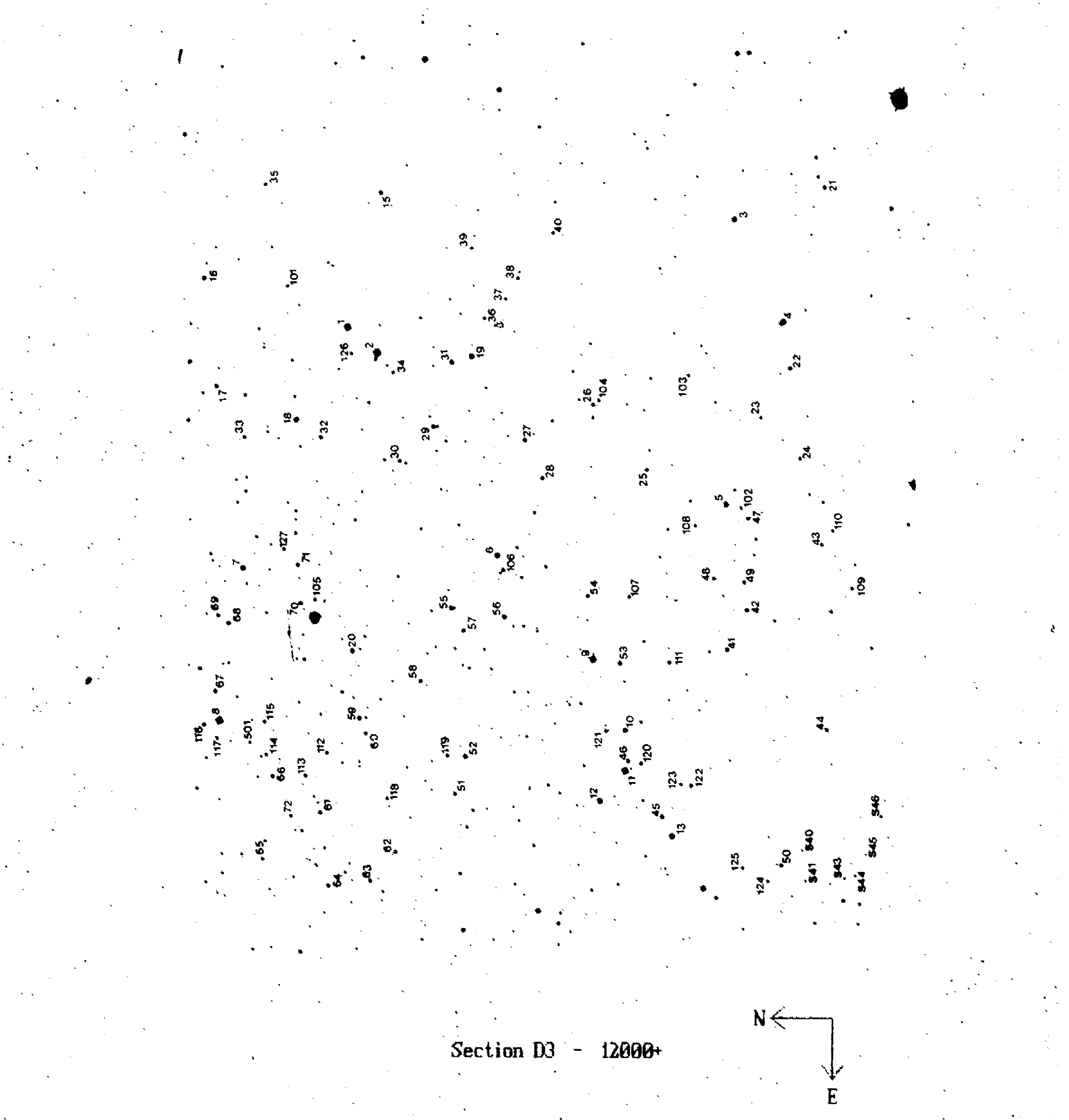

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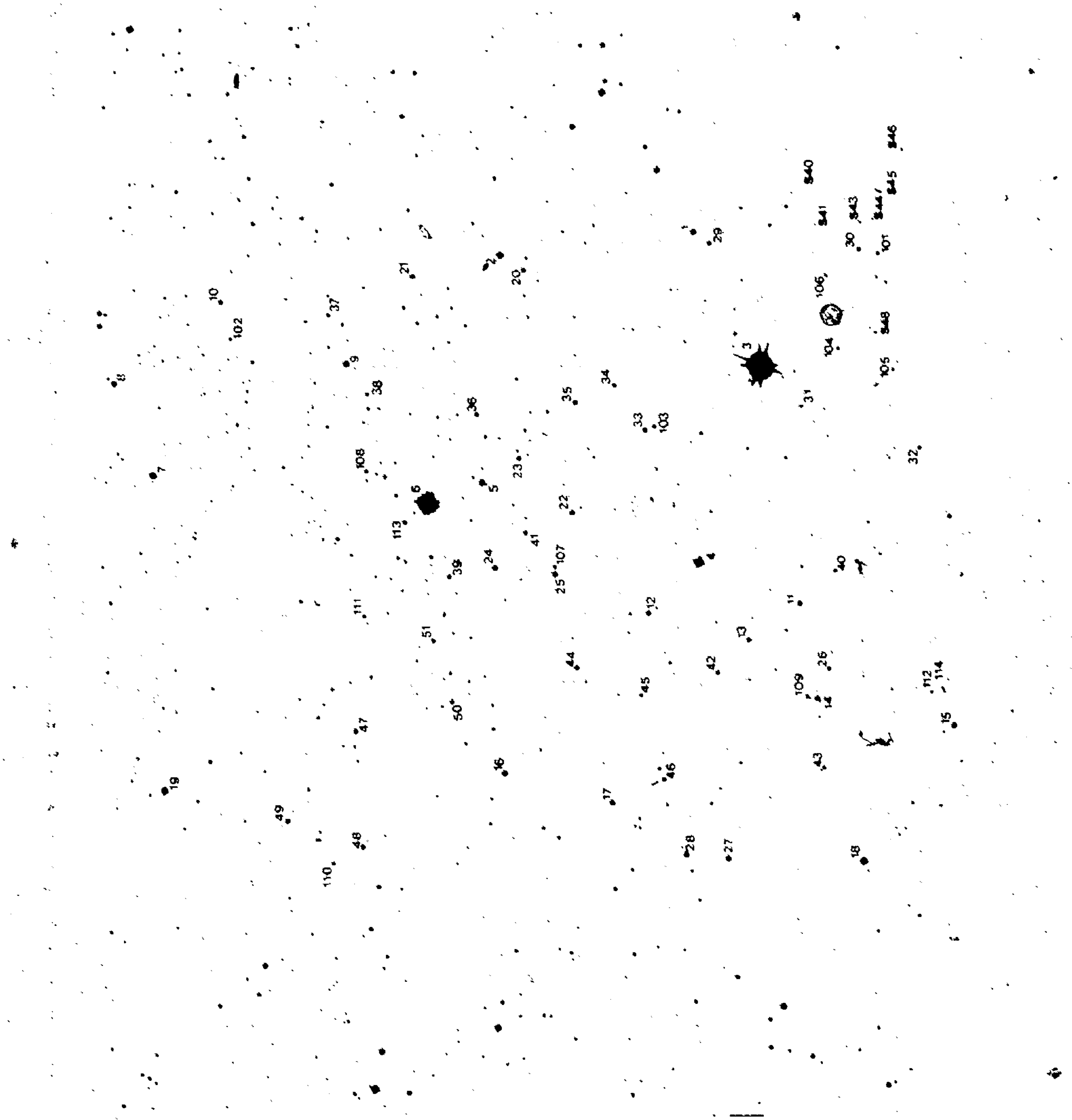

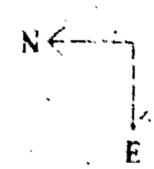

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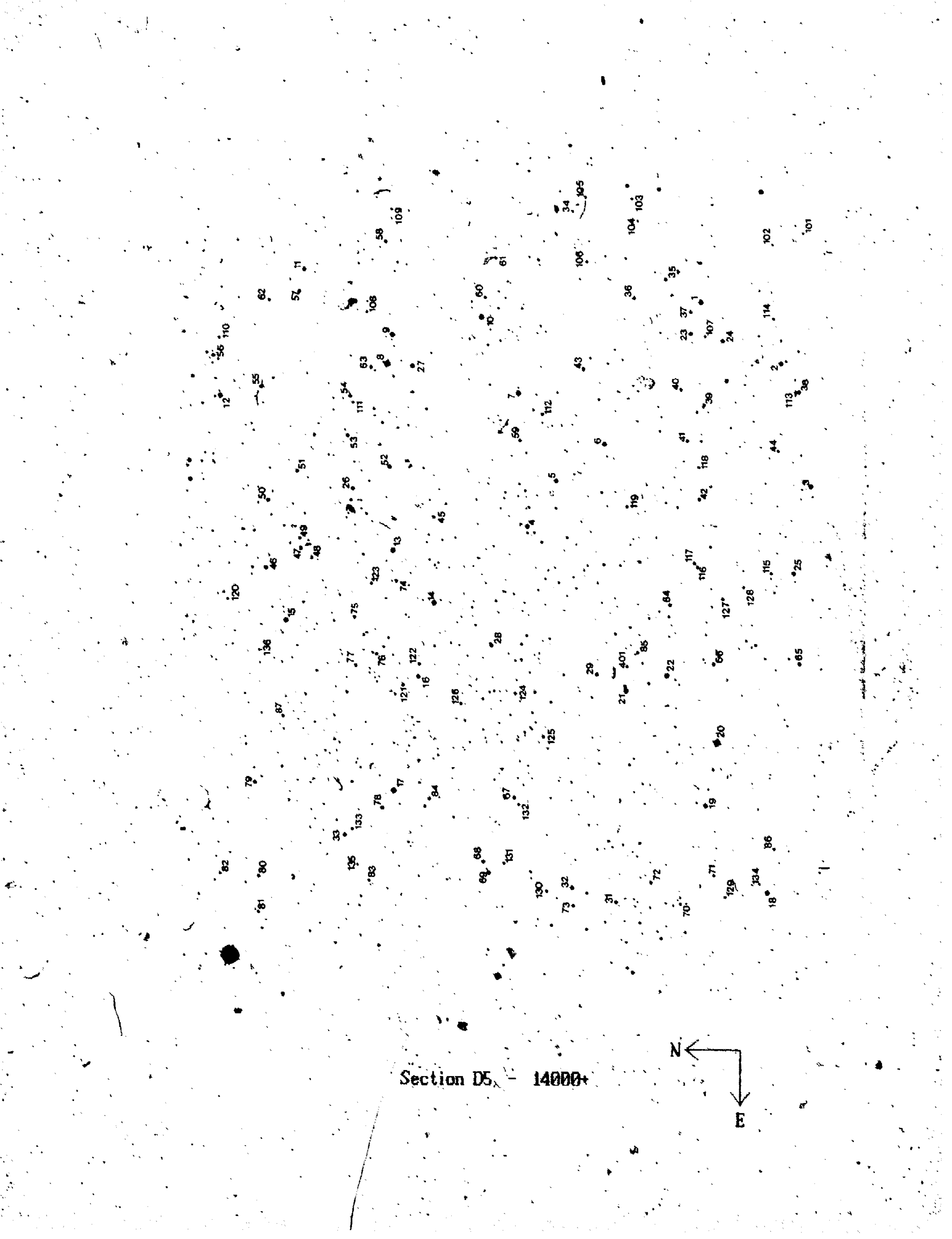

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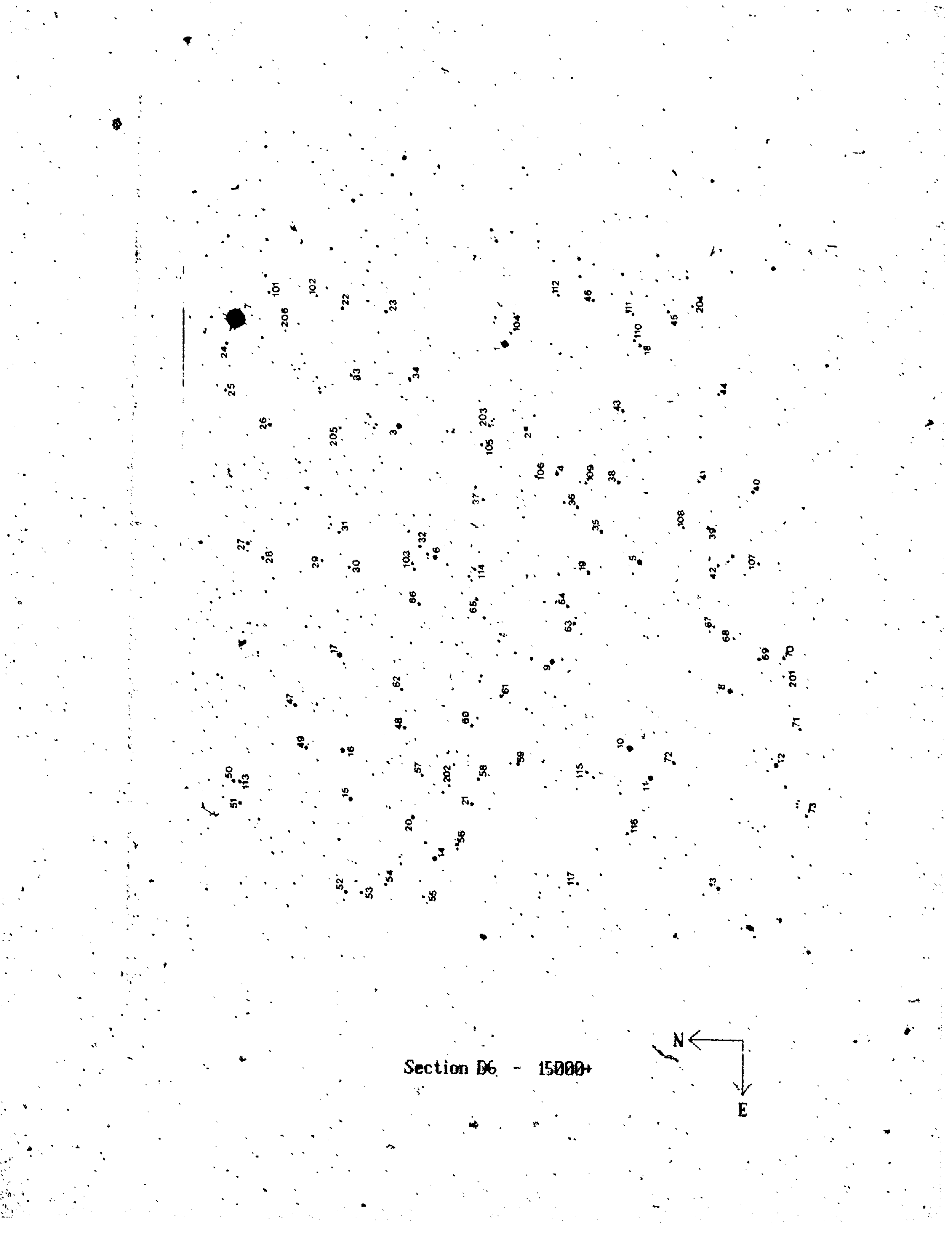

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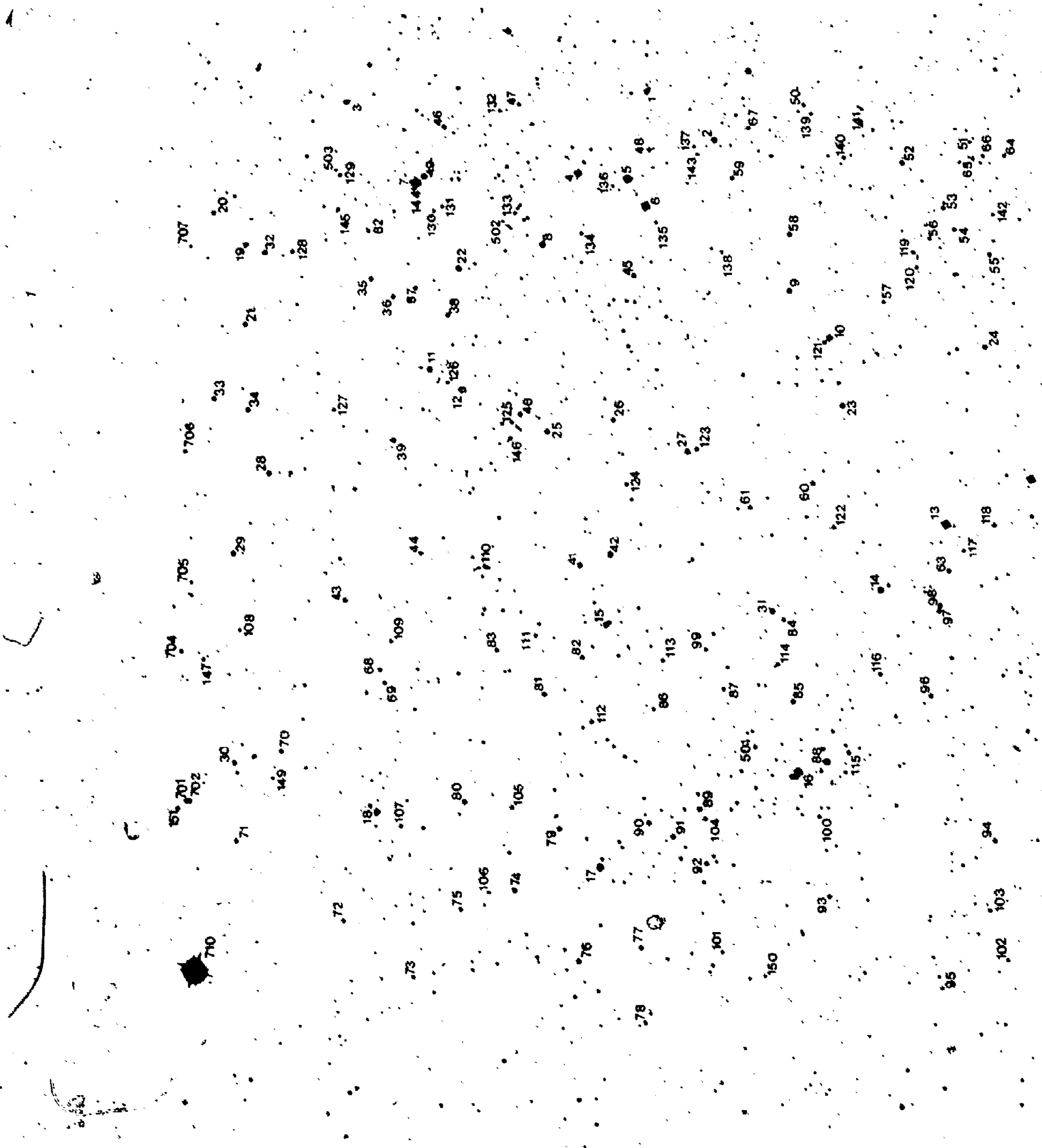

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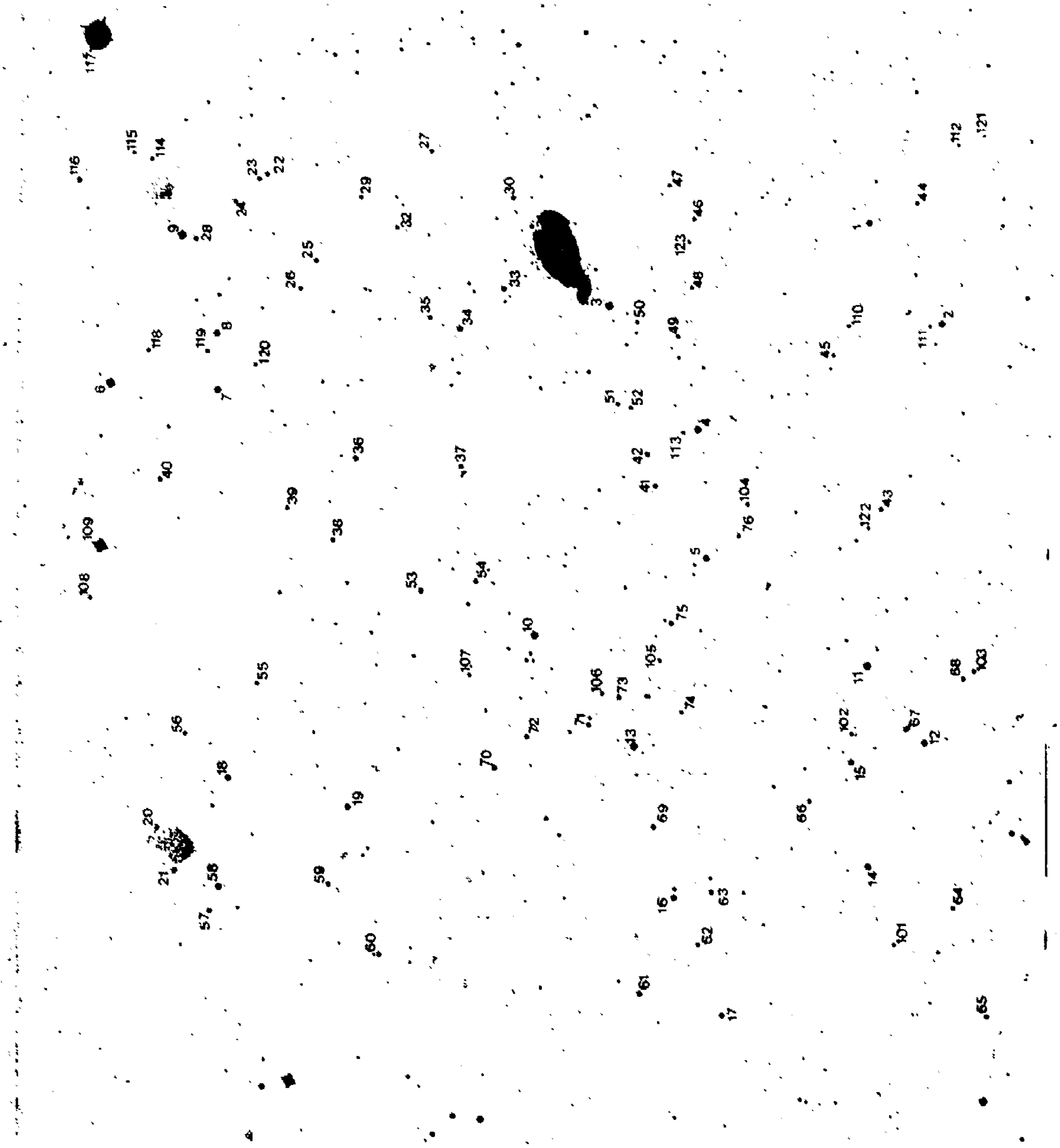

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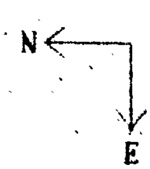

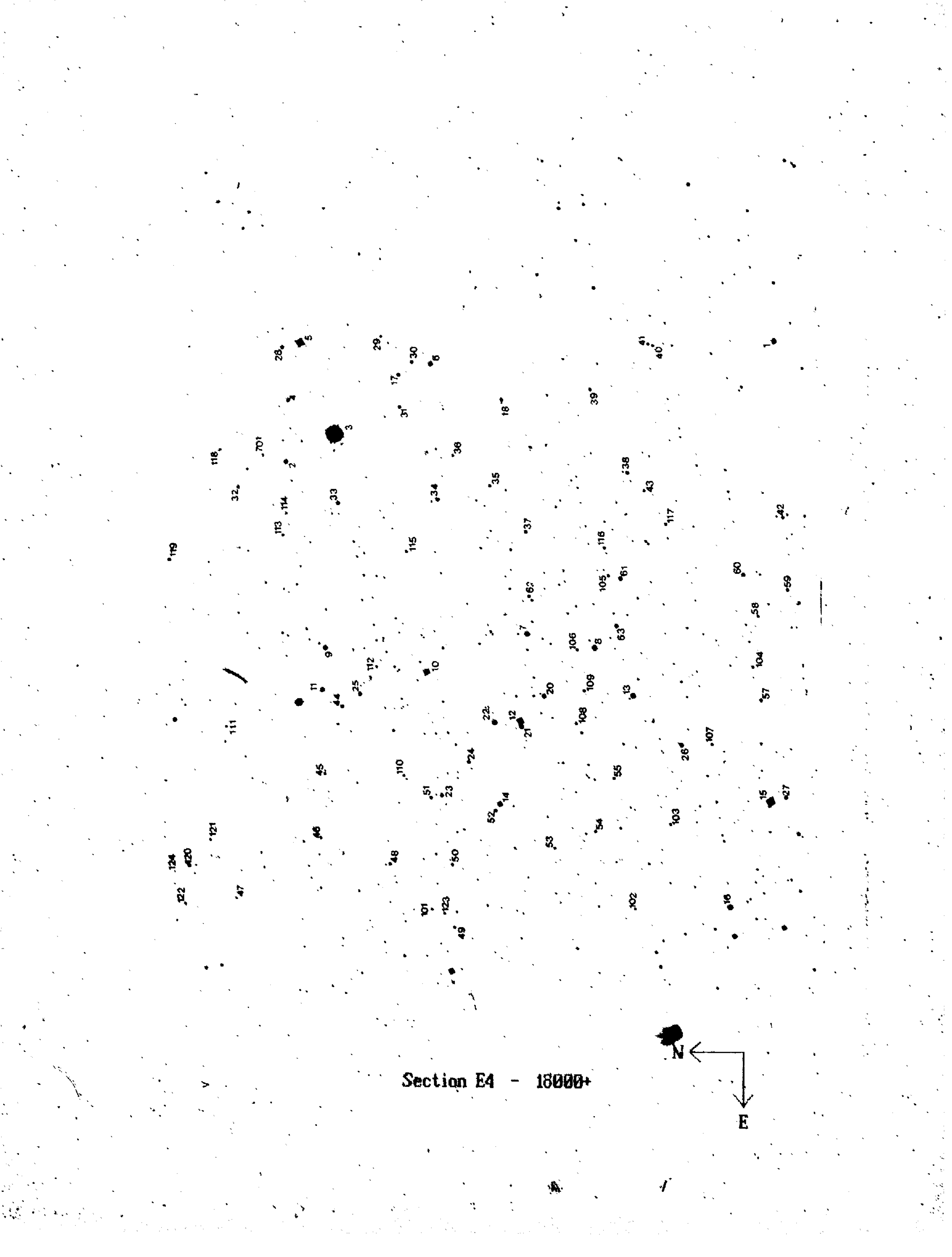

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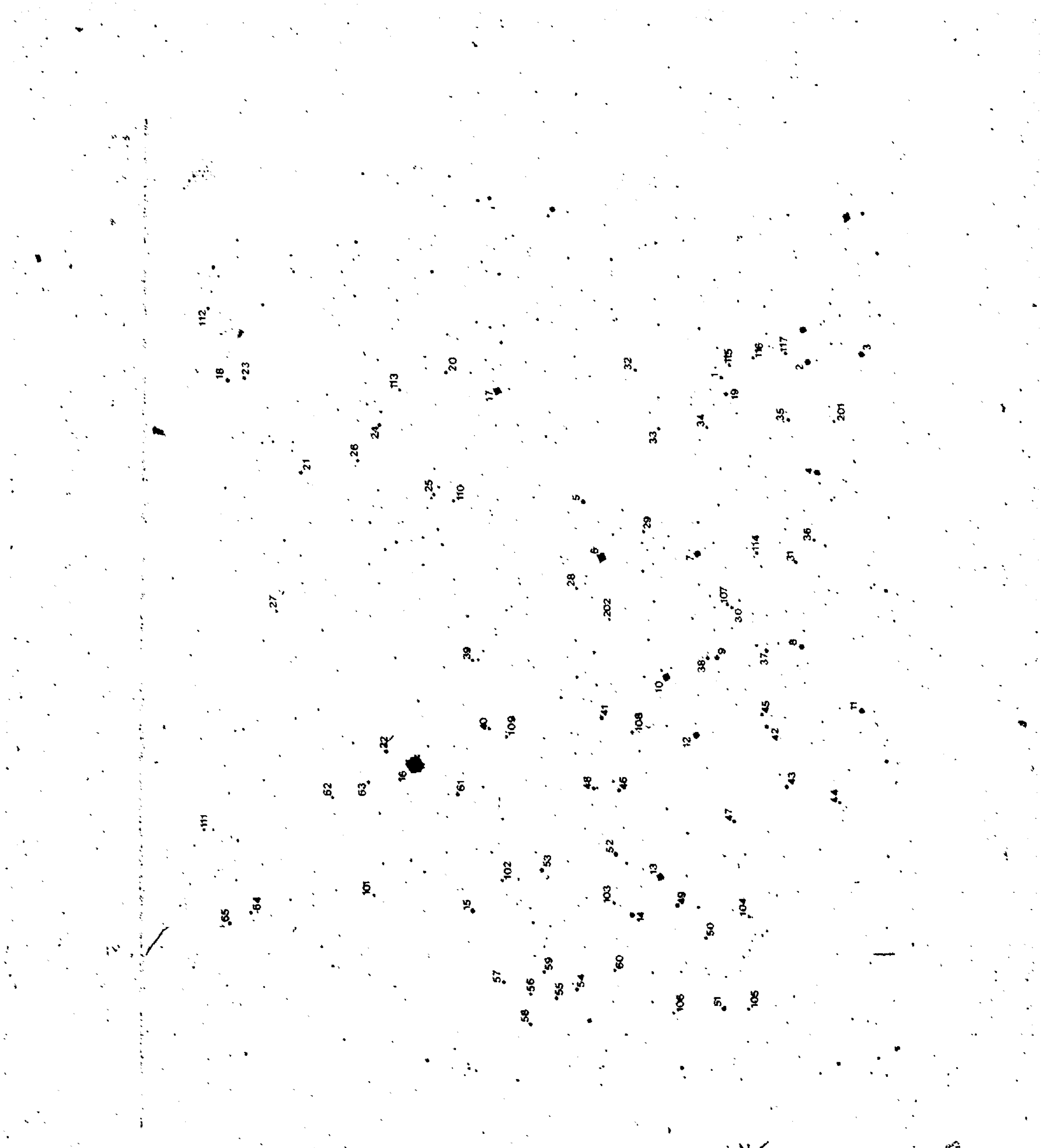

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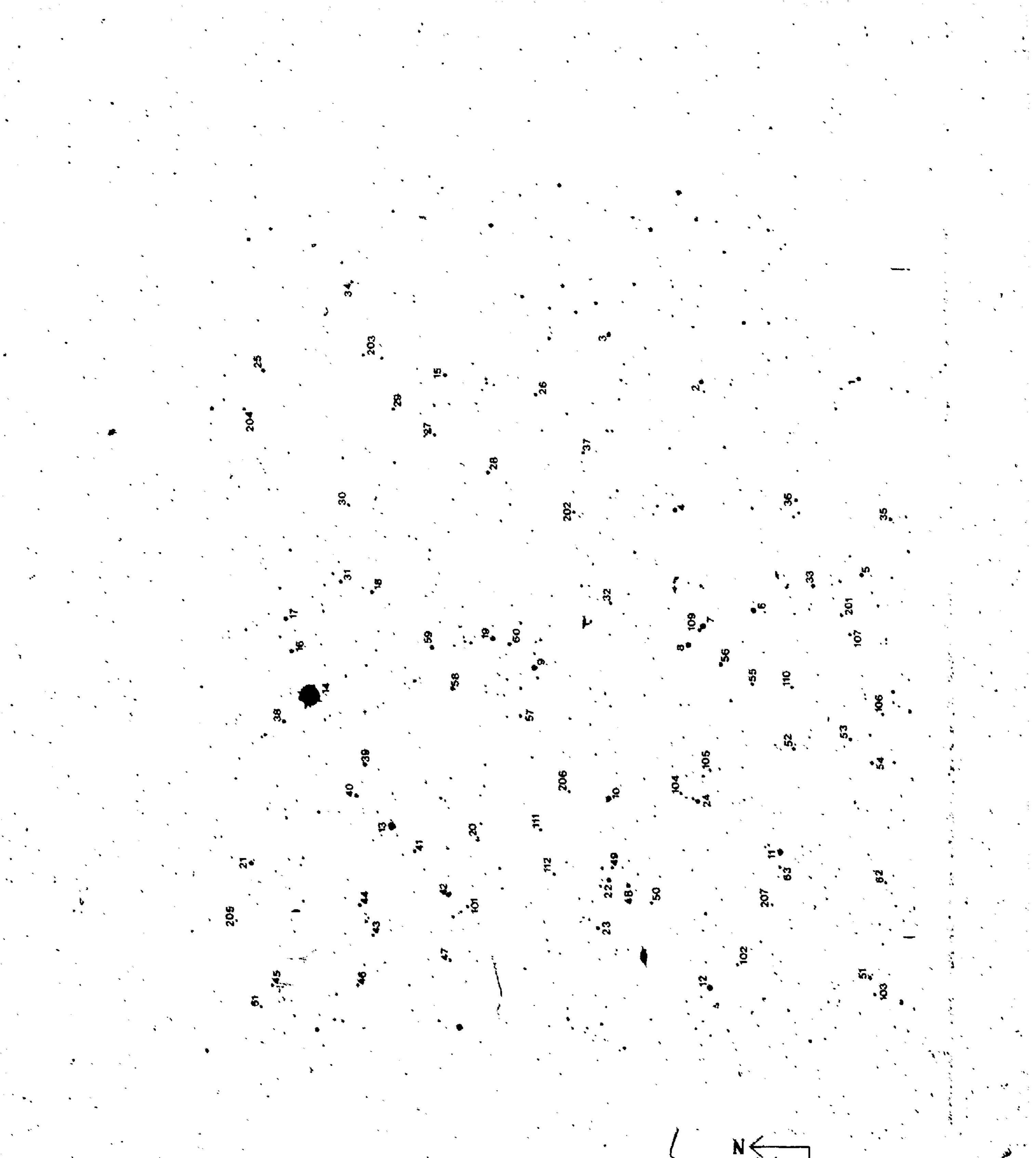

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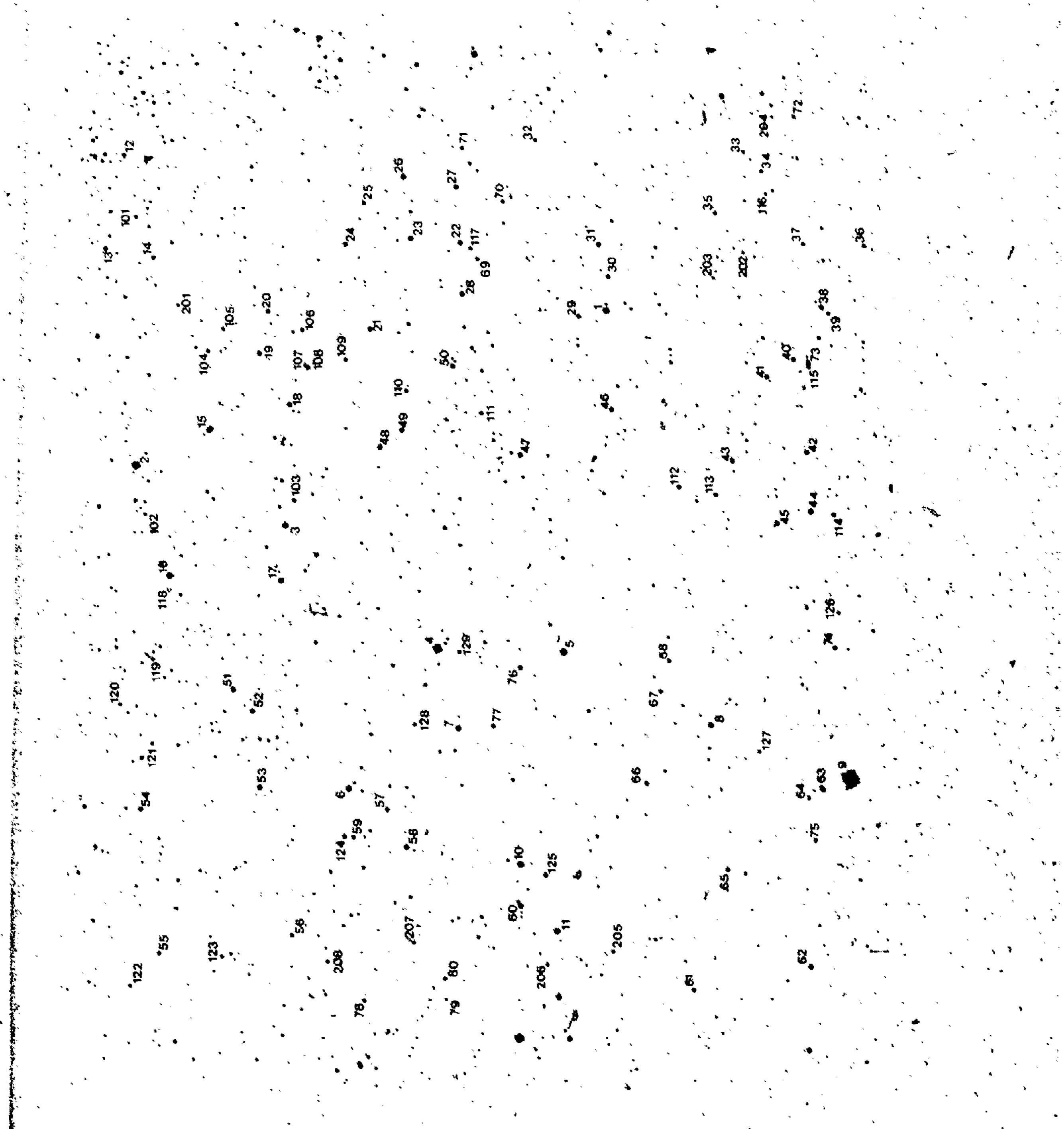
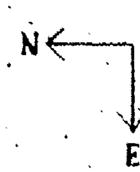
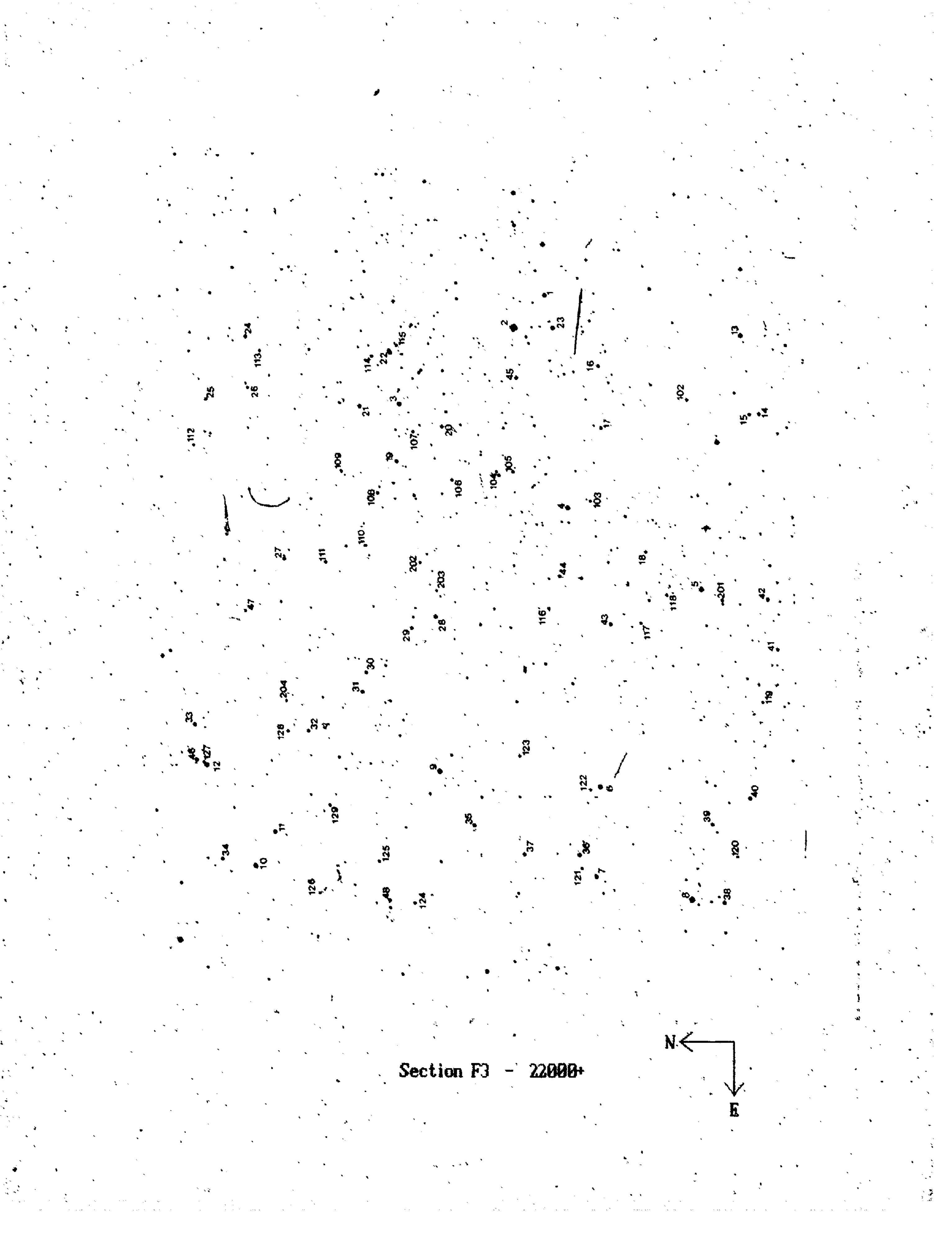
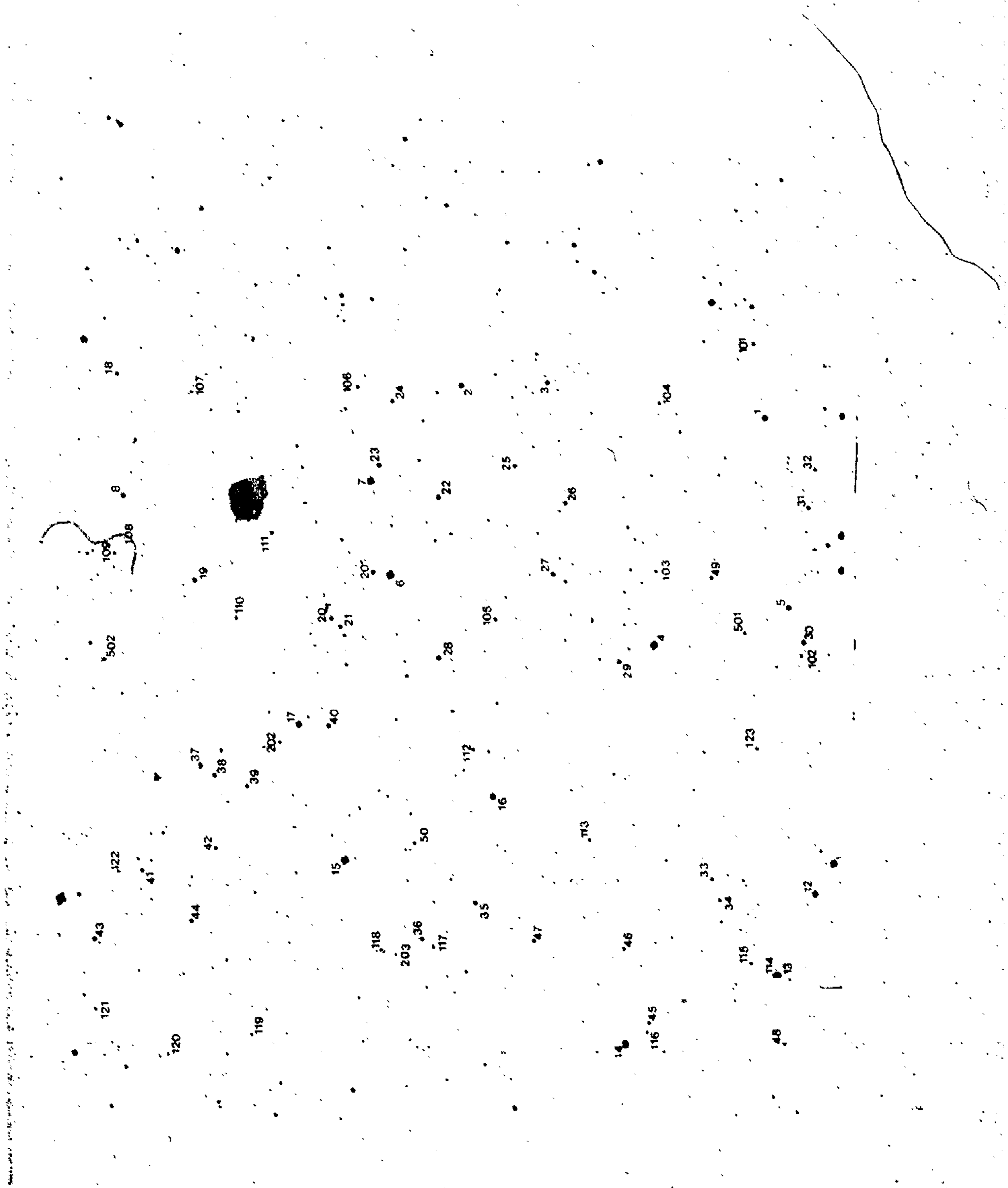


Section F2 - 21000+

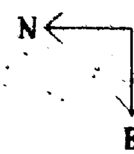


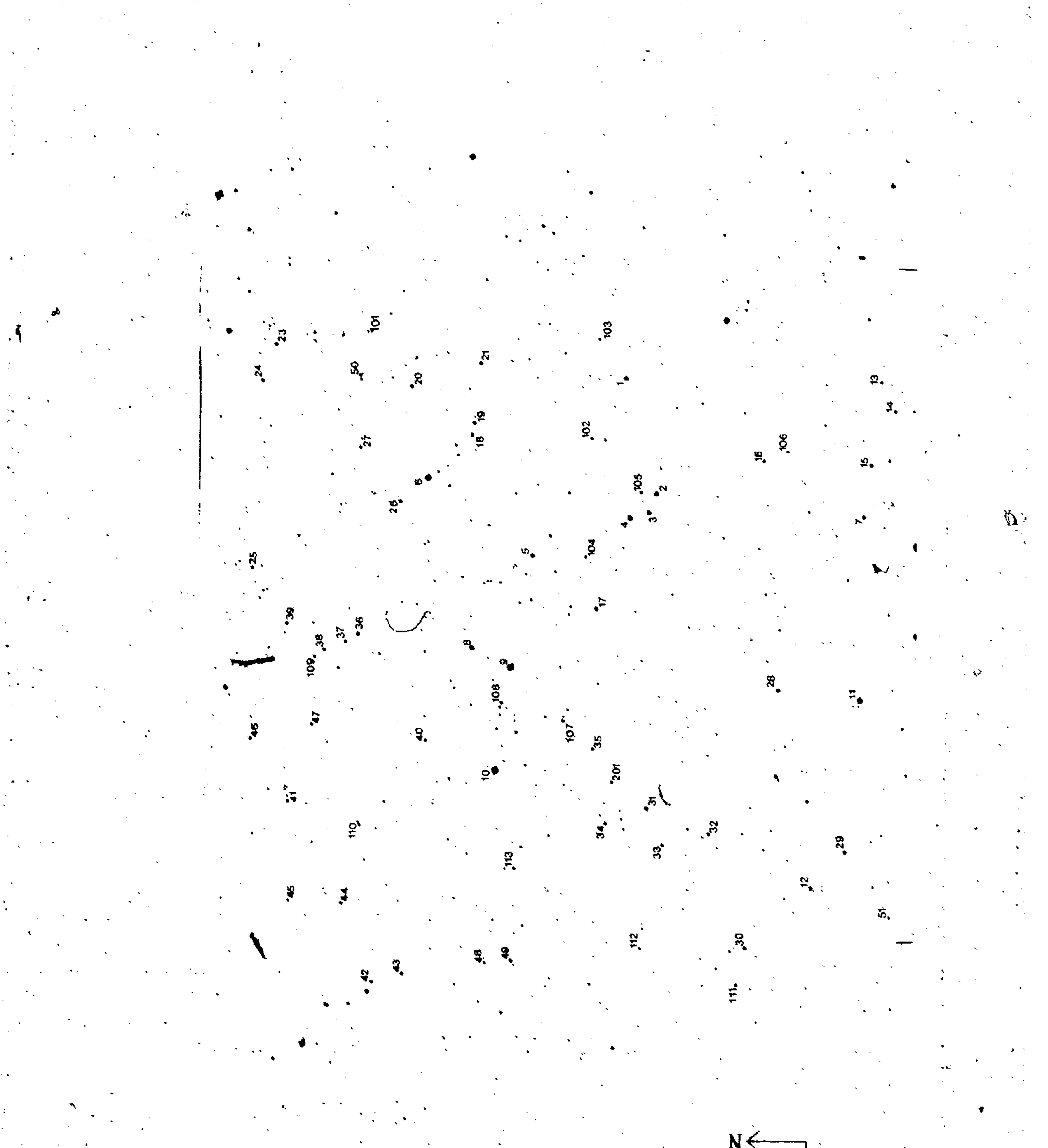


Section F3 - 22000+

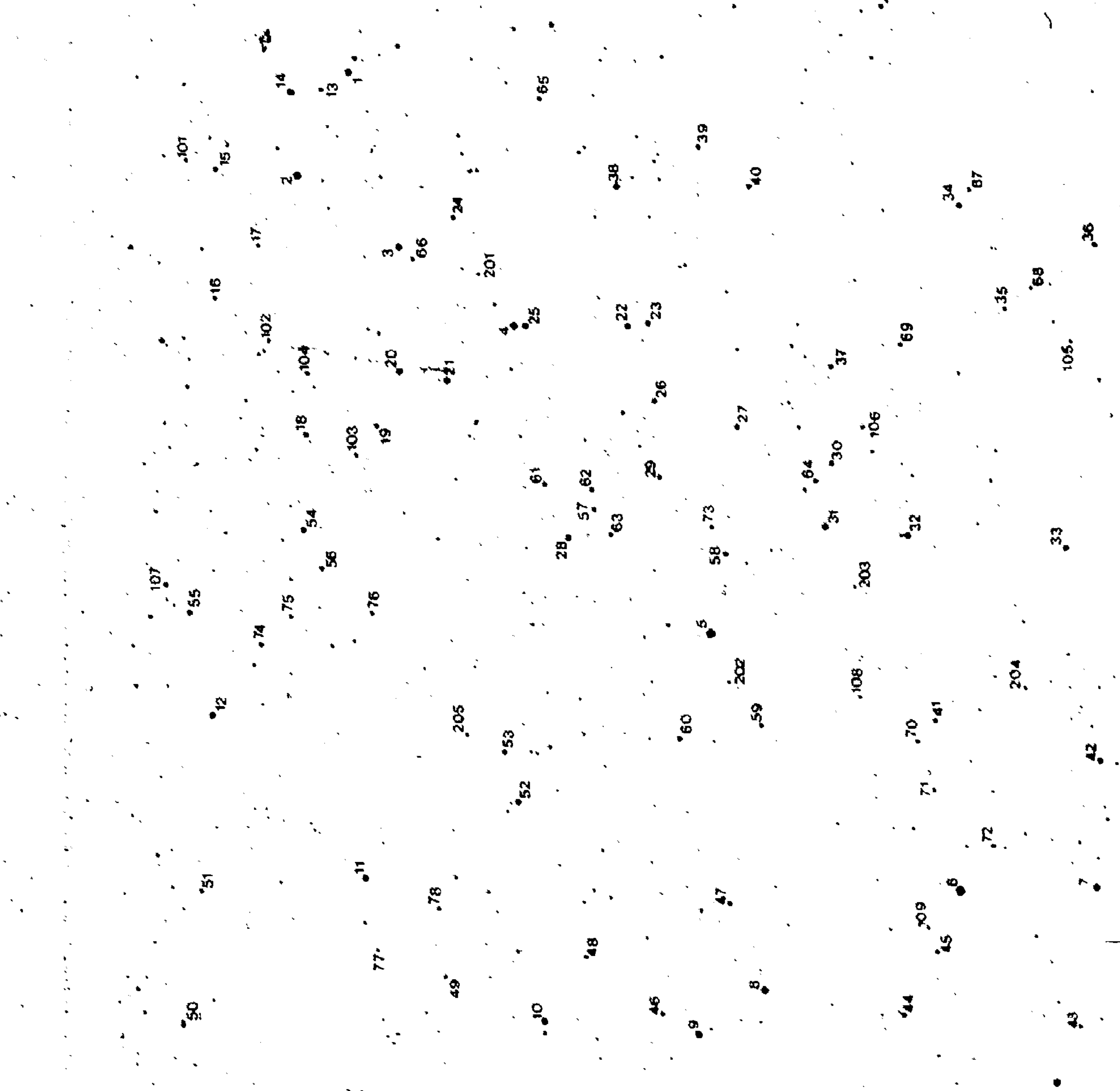


Section F4 - 23000+





Section F5 - 24000+



Section F6 - 25000+

N

E

Appendix B

Spectral Classifications and Photographic UBV Photometry for MW268 Stars

Section B2 - 1000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
1001	A4V	10.98	.47	.06	2 2 2	.33	.10	.17	
1002	F8V	9.27	.72	-.01	2 2 2	.27	.09	.17	
1003	A2V	8.68	.49	.03	2 2 2	.24	.04	.19	A2mA6-F0
1004	A9V	9.97	.64	-.03	2 2 2	.27	.15	.19	
1005	K1IV:	9.86	1.21	.69	2 2 2	.30	.13	.15	
1006	A6V	9.86	.58	-.05	2 2 2	.24	.07	.26	
1007	A0V	10.58	.33	.01	2 2 2	.28	.11	.23	
1008	A9V	10.26	.69	-.13	2 2 2	.27	.14	.21	ovlp pec?
1009	A0V	10.83	.52	.15	2 2 2	.26	.08	.20	
1010	A5V	9.04	.40	.18	2 2 2	.20	.06	.24	
1011	B8V	8.65	.14	-.40	2 2 2	.23	.09	.11	
1012	A6V	9.48	.52	.06	2 2 2	.24	.10	.19	
1013	G0IV:	10.13	.87	.08	2 3 2	.34	.10	.05	
1014	A1V	10.93	.39	.06	2 2 2	.26	.12	.15	Ap ?
1015	A3V	11.48	.60	.00	2 2 2	.25	.12	.15	
1016	F1IV:	11.35	.69	-.11	2 2 2	.31	.11	.15	
1017	A9IV:	11.07	.91	.04	2 2 2	.27	.11	.13	
1018	F::	10.52	1.46	.00	2 2 2	.30	.22	.08	emission??
1019	K0III:	10.23	1.03	.54	3 2 2	.26	.18	.17	
1020	A5V	10.82	.53	.07	2 2 2	.30	.13	.24	
1021	F3IV:	10.91	.75	-.05	2 2 2	.33	.12	.12	
1022	A3V	10.55	.30	.01	2 2 2	.27	.06	.17	ovlp Am
1023	G8III	9.75	1.11	1.01	3 2 2	.27	.11	.35	double pg
1024	A3V	11.70	.87	.30	2 2 2	.32	.17	.01	Ap
1025	G2V:	12.00	.84	-.10	2 2 2	.25	.06	.19	
1026	G5III	11.59	1.02	.08	2 2 2	.31	.03	.11	
1027	F0V	11.47	.70	-.09	2 2 2	.29	.08	.24	
1028	A8V	12.09	.62	-.06	2 2 2	.31	.07	.11	
1029	A0V	11.91	.75	.09	2 2 2	.30	.11	.10	
1030	G0:	12.14	.65	-.07	2 2 2	.33	.16	.09	ovlp
1031	A1V	12.53	.86	.21	2 2 2	.23	.13	.22	
1032	G1V	12.61	.99	.02	2 2 2	.29	.08	.10	
1033	F5V:	12.49	.78	-.15	2 2 2	.27	.10	.19	
1034	A8III:	11.51	.77	-.19	2 2 2	.27	.13	.17	ovlp
1035	G0	12.05	.76	-.16	2 2 2	.26	.15	.08	
1036	F6	12.24	.79	-.08	2 2 2	.31	.11	.12	
1037	A2V	11.72	.98	.25	1 2 2	--	.20	.09	Ap ?
1038	G6V:	11.07	.94	.28	2 2 2	.38	.09	.04	
1039	G2	12.53	.87	.02	2 2 2	.34	.22	.11	
1040	F2	12.53	.65	-.04	2 2 3	.36	.14	.06	
1041	F2	12.72	.75	-.09	2 2 2	.34	.22	.04	
1042	F0V	11.83	.61	-.15	2 2 2	.40	.21	.04	
1043	F0	12.39	.73	-.23	2 2 2	.33	.09	.15	ovlp
1044	G0	12.26	.78	-.08	2 2 2	.45	.20	.05	ovlp
1045	A3V	12.57	.79	.06	2 2 2	.30	.18	.01	Ap
1046	A7V	11.92	.57	.03	2 2 2	.34	.08	.23	
1047	F2	11.65	.69	-.03	2 2 2	.37	.13	.15	
1048	F5:	11.80	.82	.18	2 2 2	.34	.18	.16	
1049	G2V	12.62	.90	.11	2 2 2	.40	.18	.07	
1050	G0V	12.18	.86	-.07	2 2 2	.30	.13	.02	

Section B2 - 1000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
1051	F8V	12.39	.87	.09	2 2 2	.30	.12	.00	ovlp
1052	A0V	12.96	1.26	.57	2 2 2	.33	.17	.08	uxp & ovlp
1053	G0V	12.05	.86	.05	2 2 2	.37	.17	.05	
1054	K3III	10.37	1.60	1.39	2 3 2	.37	.17	.05	ovlp
1055	F2V	12.24	.73	-.05	2 2 2	.32	.11	.02	
1056	G0	12.01	.72	-.11	2 2 2	.32	.08	.05	
1057	G	12.72	.88	-.13	2 2 2	.29	.12	.08	uxp
1058	G5V	12.14	.82	-.10	2 2 2	.30	.12	.06	
1059	F6V	12.53	.73	-.16	2 2 2	.36	.19	.06	
1060	G0:	12.22	.77	-.25	2 2 2	.34	.13	.05	ovlp
1061	G8	11.51	.88	.06	2 2 2	.34	.15	.01	
1062	G	11.67	.76	-.06	2 2 2	.31	.10	.02	ovlp
1063	F0	11.61	.68	-.06	2 2 2	.30	.08	.04	
1064	A3V	12.14	.76	.31	2 2 2	.30	.14	.05	
1065	A8III:	11.97	.66	-.01	2 2 2	.42	.10	.04	
1066	M0III:	11.11	2.07	1.67	2 2 2	.30	.17	.15	uxp
1067	A2V	12.48	.71	.17	2 2 2	.31	.11	.02	
1068	A8V	11.70	.70	-.18	2 2 2	.26	.08	.05	
1069	F2V	10.87	.77	-.07	2 2 2	.25	.11	.06	
1070	F	11.43	.80	-.05	2 2 2	.35	.12	.09	ovlp
1071	G2III:	12.26	.95	.03	2 2 1	.23	.19	--	uxp
1072	F8V	11.67	.76	.03	2 2 2	.35	.15	.11	
1073	G2:	11.86	.87	-.06	2 2 2	.33	.14	.08	ovlp
1074	K	12.36	1.00	.18	2 2 2	.34	.15	.04	ovlp & uxp
1075	G3V:	12.03	.95	.00	2 2 3	.27	.07	.12	
1076	G0	12.54	.82	-.19	2 2 2	.25	.12	.09	
1077	F	12.09	.61	-.20	2 2 2	.34	.14	.11	
1078	F5V:	12.29	.73	-.05	2 2 2	.32	.15	.10	
1079	A8V:	10.73	1.78	1.36	2 2 1	.25	.20	--	
1080	A8V:	11.90	.61	-.15	2 2 2	.31	.07	.09	
1081	G0:	12.18	.70	-.10	2 2 2	.29	.10	.09	ovlp ?
1082	F8	12.32	.75	-.12	2 2 2	.31	.11	.13	
1083	G0	11.96	.84	-.13	2 2 2	.28	.18	.03	diffuse
1101	K0III	12.62	1.05	.13	2 2 2	.34	.16	.04	uxp
1102		12.71	.90	-.01	2 2 2	.34	.07	.04	
1103		12.33	1.21	.70	2 2 2	.30	.15	.06	
1104		12.69	1.10	.38	2 2 2	.32	.07	.09	
1105		12.32	.86	.17	2 1 2	.21	--	.12	
1106		12.20	1.53	1.41	2 1 2	.33	--	.03	
1107		12.41	2.27	--	2 1 0	.40	--	--	

Section B3 - 2000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
2001	K0III	9.65	1.28	1.26	2 2 2	.32	.16	.02	
2002	A3IV	10.04	.60	.27	2 2 2	.30	.06	.12	
2003	A0V	10.54	.16	.07	2 2 2	.23	.10	.10	
2004	F2V:	9.51	.59	-.06	2 2 2	.21	.10	.08	nw H lines
2005	A7V	8.15	.32	.11	2 2 2	.14	.07	.06	
2006	A1V	10.44	.26	.12	2 2 2	.28	.09	.00	Ap
2007	K0III	9.08	.90	.55	2 2 2	.25	.16	.02	
2008	A1V	10.15	.51	.05	2 2 2	.29	.07	.00	pec
2009	A3V	10.37	.30	.11	2 2 2	.39	.11	.01	
2010	A1V	10.44	.20	.13	2 2 2	.26	.05	.12	
2011	A0V	10.56	.35	.12	2 2 2	.23	.11	.14	
2012	A5V	10.25	.39	.02	2 2 2	.21	.12	.12	
2013	G5IV:	8.85	.96	.49	2 2 2	.19	.07	.07	pos G2V
2014	A0V	9.01	.09	.12	2 2 2	.20	.13	.07	
2015	G8:	9.91	.71	.18	2 2 2	.22	.17	.02	double
2016	G2	10.17	.64	.13	2 2 2	.26	.11	.03	
2017	G8III	10.33	1.12	.95	2 2 2	.26	.14	.05	
2018	F2V	11.23	.64	-.04	2 2 2	.29	.08	.02	
2019	A0V	11.94	.47	.24	2 2 2	.37	.05	.01	
2020	A9V:	11.05	.57	.02	2 2 2	.26	.13	.05	A2mA8-A8 ?
2021	A9V	10.93	.59	.13	2 2 2	.22	.08	.00	
2022	A0V:	10.87	.50	.06	2 2 2	.31	.13	.05	
2023	A4V	11.02	.44	.08	2 2 2	.16	.11	.12	
2024	G0:	12.98	.76	-.15	2 2 2	.39	.17	.15	uxp
2025	G	12.31	.81	.12	2 2 2	.35	.10	.16	uxp
2026	F8	11.72	.67	-.03	2 2 2	.33	.11	.10	
2027	G0	11.22	.72	.04	2 2 2	.28	.12	.12	
2028	F5:	11.23	.70	.09	2 2 2	.34	.17	.09	ovlp
2029	F	12.18	.78	-.04	2 2 1	.33	.09	--	
2030	A4V	11.24	.53	.13	2 2 2	.30	.09	.09	
2031	A8V	11.68	.52	-.02	2 2 2	.30	.13	.08	
2032	G	12.03	.73	.06	2 2 2	.40	.13	.13	diffuse
2033	F8IV:	11.24	.60	.01	2 2 2	.36	.13	.09	
2034	F8IV:	11.66	.60	-.06	2 2 2	.38	.18	.11	
2035	A6V	11.83	.53	-.08	2 2 2	.26	.05	.12	
2036	G	12.83	.77	-.02	2 2 2	.22	.19	.30	uxp
2037	G0	11.68	.65	.04	2 2 2	.29	.09	.00	
2038	F2V:	11.98	.70	.09	2 2 2	.30	.17	.10	
2039	K0III:	11.02	1.23	.91	2 2 2	.23	.12	.02	
2040	A5V	11.64	.59	.19	2 2 2	.33	.09	.01	Ap Sr
2041	G	12.85	.72	-.18	2 2 2	.35	.15	.00	ovlp
2042	G5III:	11.82	.76	-.01	2 2 2	.24	.09	.08	ovlp
2043	F8:	12.39	.70	-.06	2 2 2	.32	.12	.16	ovlp
2044	G5V:	12.54	.85	-.02	2 2 2	.34	.06	.03	
2045	F5	13.13	.79	.04	2 2 2	.34	.14	.05	
2046	G	11.78	.72	-.03	2 2 2	.35	.05	.04	ovlp
2047	G	12.03	.79	.02	2 2 2	.36	.09	.11	ovlp
2048	G0:	12.48	.70	-.06	2 2 2	.35	.14	.07	
2049	G8	12.45	.66	-.06	2 2 2	.31	.10	.20	
2050	G8	12.43	.75	.00	2 2 2	.26	.14	.17	

Section B3 - 2000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
2051	F	11.79	.35	-.03	2 2 2	.26	.21	.20	ovlp
2052	F	11.29	.42	-.04	2 2 2	.16	.19	.16	ovlp
2053	A7V	11.87	.47	.04	2 2 2	.27	.23	.21	
2054	F6V	11.55	.63	.08	2 2 2	.32	.20	.06	
2055	A1IV	12.77	.53	.41	2 2 2	.31	.26	.12	
2056	A0V	12.52	.56	.35	2 2 2	.29	.23	.12	
2057	G5V:	12.12	.76	.28	2 2 2	.21	.24	.01	
2058	G0V:	12.07	.76	-.08	2 2 2	.31	.20	.09	
2059	[illegible]0:	11.23	.61	-.10	2 2 2	.27	.13	.02	ovlp
2060	A	12.44	.63	-.05	2 2 2	.35	.19	.06	ovlp
2061	F5III	11.83	.63	-.09	2 2 2	.26	.16	.01	
2062	G2V	11.33	.69	.13	2 2 2	.30	.17	.01	
2063	F5	12.49	.74	-.07	2 2 2	.30	.31	.07	ovlp
2064	A8	12.61	.67	-.06	2 2 2	.30	.21	.04	ovlp
2065	A8III:	12.31	.57	-.13	2 2 2	.31	.09	.19	
2066	G2III:	12.42	.72	-.22	2 2 2	.28	.10	.04	
2067	F6V	12.66	.67	.02	2 2 2	.27	.21	.03	
2068	F	11.74	.63	-.05	2 2 2	.31	.11	.03	
2069	G2V	11.61	.66	-.05	2 2 2	.39	.15	.07	
2101		12.06	1.13	.99	2 2 2	.34	.15	.28	
2102		13.15	.67	-.17	2 2 2	.29	.19	.04	
2103		12.28	.79	.22	2 2 2	.38	.14	.06	
2104		12.69	.69	-.07	2 2 2	.24	.22	.02	
2105		11.88	.59	-.06	2 2 2	.25	.05	.05	
2106		13.06	.66	-.09	2 2 2	.27	.14	.07	
2107		12.75	.95	.12	2 2 2	.33	.23	.12	
2108		12.74	.71	-.23	2 2 2	.27	.10	.01	
2109		13.22	.76	-.07	2 3 2	.30	.14	.03	
2110		13.01	.80	-.17	2 2 2	.28	.19	.01	
2111		13.20	.95	.41	2 2 2	.42	.12	.03	
2112		13.01	.92	.04	2 2 2	.32	.15	.02	
2113		12.98	.77	-.17	2 2 2	.32	.05	.07	
2114		11.97	1.29	-.08	2 2 2	.27	.22	.06	
2115		13.03	.73	.12	2 2 2	.34	.30	.12	
2116		12.52	.58	.01	2 2 2	.24	.12	.10	
2117		13.08	.70	-.06	2 2 2	.23	.26	.21	
2118		12.32	.63	.04	2 2 2	.25	.19	.20	
2119		12.78	.73	.13	2 2 2	.28	.25	.26	
2120		13.18	2.35	--	2 1 0	.28	--	--	
2121		12.02	2.29	--	2 1 0	.30	--	--	
2122		13.02	.67	.13	2 1 2	.21	--	.01	

Section B4 - 3000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
3001	K0III:	10.04	1.10	1.18	2 2 2	.20	.27	.04	ovlp
3002	G3V:	9.37	1.45	1.05	2 2 2	.10	.17	.02	diffuse ?
3003	O9	10.04	.64	-.40	2 2 2	.19	.13	.05	weak lined
3004	A1V	10.58	.18	.18	2 2 2	.20	.14	.08	
3005	A0V	10.05	.15	-.05	2 2 2	.21	.08	.11	
3006	A1V	9.32	.12	.32	2 2 2	.13	.08	.19	double pg
3007	A0V	8.29	.07	.20	2 2 2	.10	.03	.10	double pg
3008	A3V	9.39	.37	.29	2 2 2	.21	.10	.19	
3009	A0V	10.21	.16	.16	4 2 2	.23	.15	.20	double pg
3010	A4V	9.94	.18	.20	2 2 2	.25	.18	.12	
3011	G5V:	9.86	.82	.40	2 2 2	.23	.17	.03	
3012	A1V	9.44	.24	.08	2 2 2	.19	.10	.13	
3013	A4V	10.23	.35	.20	2 2 2	.20	.22	.20	Ap ?
3014	A1V	8.55	.25	.12	2 2 2	.29	.06	.20	
3015	A1V	11.13	.27	.15	2 2 2	.45	.18	.03	A0mA3-A7
3016	G9III	9.28	1.11	.91	2 2 2	.19	.13	.20	
3017	A0V	9.65	.12	-.17	2 2 2	.31	.10	.19	A0mA2-A3
3018	A6V:	11.23	.41	.13	2 2 2	.27	.10	.04	Ap ?
3019	B9V	11.29	.32	-.01	2 2 2	.27	.11	.02	
3020	K2III	10.40	1.13	.84	2 2 2	.23	.27	.04	
3021	B8V	11.74	.64	.35	2 2 2	.36	.26	.05	
3022	B5V	11.07	.53	-.14	2 2 2	.32	.19	.07	
3023	G2III	10.87	.65	.17	2 2 2	.22	.23	.02	
3024	A0V	11.27	.43	.00	2 2 2	.30	.16	.01	ovlp
3025	A0V	11.42	.12	.28	2 2 2	.29	.13	.10	
3026	K1IV:	10.25	1.00	.99	2 2 2	.29	.21	.10	?
3027	B8V	10.64	.39	-.03	2 2 2	.23	.19	.05	
3028	A0V:	10.57	.38	-.06	2 2 2	.19	.14	.00	
3029	A2V	11.30	.27	.23	2 2 2	.20	.19	.05	
3030	A2V	10.97	.65	.44	2 2 2	.20	.17	.07	
3031	G2V:	10.84	.68	.14	2 2 2	.26	.18	.17	ovlp
3032	A1V	11.22	.74	.54	2 2 2	.31	.18	.23	
3033	B8:	11.70	.50	-.06	2 2 2	.37	.11	.09	
3034	F8	10.99	.71	.23	2 2 2	.26	.20	.14	pec ?
3035	B8III:	10.89	.63	-.13	2 2 2	.41	.20	.20	
3036	G5III	11.10	.62	.10	2 2 2	.37	.24	.04	
3037	B9V	10.65	.21	.13	2 2 2	.32	.14	.04	
3038	A2V	11.50	.43	.17	2 2 2	.35	.23	.07	
3039	G3III	11.48	.63	.00	2 2 2	.26	.10	.15	
3040	G1III:	11.53	.58	-.01	2 2 2	.22	.25	.03	
3041	A1V	12.16	.41	.33	2 2 2	.27	.22	.05	
3042	K	10.75	1.35	1.05	2 2 2	.52	.19	.33	double pg
3043	F8	12.52	.53	.01	2 2 2	.37	.20	.13	
3044	F2V	11.79	.43	-.01	2 2 2	.37	.26	.02	
3045	G8:	11.31	1.30	1.02	2 2 2	.28	.26	.07	
3046	G2:	12.60	.62	.00	2 2 2	.28	.18	.16	strong Fe?
3047	A0V:	12.40	.93	.74	2 2 2	.24	.21	.06	Ap
3048	A1V:	11.52	.76	.39	2 2 2	.23	.08	.03	ovlp
3049	B	12.76	.72	.00	2 2 2	.26	.30	.04	uxp
3050	A0V	11.87	.52	.10	2 2 2	.27	.29	.07	

Section B4 - 3000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
3051	A0V:	11.84	.51	.12	2 2 2	.28	.24	.02	Ap
3052	G	11.22	1.78	1.39	2 2 2	.25	.33	.00	uxp
3053	A3V	12.32	.50	.14	2 2 2	.54	.16	.27	double pg
3054	M1:	12.89	.62	.21	2 2 2	.36	.34	.06	uxp
3055	G0	12.21	.75	-.12	2 2 2	.38	.21	.15	
3056	F0V	12.47	.52	-.04	2 2 2	.32	.19	.07	
3057	A3V	12.33	.73	.36	2 2 2	.35	.14	.04	
3058	G	11.35	1.19	.82	2 2 2	.29	.23	.01	ovlp
3059	M4III	10.81	2.16	2.49	2 2 2	.33	.15	.05	
3060	K0:	11.44	1.45	1.04	2 2 2	.26	.17	.10	weak Z ?
3061	A0	13.69	.73	.31	1 2 2	--	.15	.18	uxp
3062	B5V	12.45	.59	.20	2 2 2	.39	.12	.07	double pg
3063	B9V	12.21	.62	.37	2 2 2	.28	.23	.05	Bp Si4200
3064	F0	12.17	.48	.05	2 2 2	.33	.14	.17	
3065	M2:	10.11	2.33	2.65	2 2 2	.33	.24	.09	ovlp
3066	F	11.57	.73	.10	2 2 2	.36	.11	.06	
3067	F0	11.87	.55	.09	2 2 2	.3[illegible]	.22	.17	
3068	G0	12.67	.75	.20	2 2 2	.46	.15	.31	
3069	G5	11.09	1.40	.81	2 2 2	.33	.27	.06	class III?
3070	A3V	12.14	.74	.26	2 2 2	.41	.29	.03	
3071	G0	11.69	.73	-.01	2 2 2	.32	.23	.13	
3072	F4V	10.76	.57	-.07	2 2 2	.34	.26	.03	double pg
3073	B9V	11.29	.55	-.06	2 2 2	.30	.17	.01	
3074	G8III	11.00	1.42	1.17	2 2 2	.26	.24	.05	
3075	K3III:	11.56	1.95	2.15	2 2 2	.29	.24	.05	ovlp
3076	B9V	12.51	.56	.10	2 2 2	.41	.10	.04	
3077	A0V	12.48	.44	.34	2 2 2	.35	.23	.04	ApSi
3078	M1III	10.52	1.95	2.55	2 2 2	.38	.32	.02	
3079	A2V	11.75	.49	.54	2 2 2	.46	.21	.02	
3080	G8	10.96	1.40	1.23	2 2 2	.31	.25	.11	
3081	F0V:	11.48	.78	.56	2 2 2	.42	.25	.05	
3082	B7:	11.93	.60	.01	2 2 2	.40	.20	.00	
3083	F8	12.50	.52	.23	2 2 2	.44	.22	.12	ovlp
3101		11.81	1.29	.78	2 2 2	.22	.28	.10	
3102		12.43	.39	.03	2 2 2	.24	.17	.20	
3103		12.66	.52	-.12	2 2 2	.21	.10	.10	
3104		12.46	.68	.12	2 2 2	.32	.26	.05	
3105		12.56	.72	.03	2 2 2	.33	.29	.03	
3106		12.24	.58	-.02	2 2 2	.28	.28	.03	
3107		12.87	.64	.25	2 2 2	.30	.32	.03	
3108		12.35	.54	-.27	2 2 1	.34	.22	--	
3109		11.81	.57	.02	2 2 2	.27	.23	.04	
3110		11.98	.63	-.12	2 2 2	.30	.10	.02	
3111		11.83	.75	.48	2 2 2	.26	.25	.01	
3112		11.64	1.34	1.13	2 2 2	.33	.31	.18	
3113		11.84	1.66	1.32	2 2 2	.29	.26	.15	
3114		11.84	.46	.00	2 2 2	.46	.01	.31	double pg
3115		12.04	.46	.14	2 2 2	.55	.14	.26	double pg
3117		12.76	.85	.09	3 2 2	.35	.20	.07	
3118		12.87	.53	-.04	2 2 2	.30	.22	.19	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
3119		11.59	1.52	1.17	2 2 2	.32	.31	.05	
3120		12.60	2.08	--	2 1 0	.32	--	--	
3121		12.77	.64	.45	2 1 2	.28	--	.07	
3122		12.67	.79	.45	2 1 2	.30	--	.09	
3123		12.81	.65	.82	2 1 2	.25	--	.01	
3124		12.42	1.96	1.17	2 1 1	.35	--	--	
3125		12.73	.73	.59	2 1 2	.31	--	.01	
3126		12.18	1.37	1.48	2 1 2	.32	--	.02	
3127		11.69	1.70	1.68	2 1 2	.25	--	.03	
3128		12.55	1.74	1.35	2 1 1	.33	--	--	
3129		12.62	1.58	--	2 1 0	.34	--	--	
3130		12.07	1.54	1.04	2 2 2	.38	.26	.21	
3131		12.60	2.31	--	2 1 0	.28	--	--	
3132		12.86	1.60	1.06	2 1 2	.30	--	.10	
3133		12.38	1.57	--	2 1 0	.33	--	--	
3134		12.88	.76	1.20	2 1 2	.39	--	.00	
3135		12.03	1.14	.93	2 1 2	.45	--	.10	
3136		12.09	1.18	1.00	2 1 2	.34	--	.12	
3137		12.52	1.20	1.53	2 1 2	.46	--	.01	
3138		11.98	1.15	1.27	2 1 2	.40	--	.01	
3139		12.46	1.31	1.32	2 1 2	.34	--	.03	
3140		12.52	2.23	--	2 1 0	.31	--	--	
3141		12.86	2.43	--	2 1 0	.44	--	--	
3142		12.11	1.97	--	2 1 0	.40	--	--	
3143		12.60	2.17	--	2 1 0	.41	--	--	
3601		--	--	--	0 0 1	--	--	--	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
4001	F1III	10.20	.52	.19	2 2 2	.35	.15	.13	weak H
4002	A8V	9.80	.53	.36	2 2 2	.33	.22	.19	ApSrEuCr
4003	A6V	10.49	.38	.32	2 2 2	.29	.19	.18	A2mA4-A6
4004	K0III	8.97	1.17	.94	2 3 2	.40	.15	.22	weak lined
4005	A5V	10.04	.65	.63	2 2 2	.46	.18	.23	
4006	M5III	9.52	1.83	2.20	2 2 2	.53	.23	.17	
4007	M3III	8.50	2.30	2.70	2 2 2	.42	.24	.25	
4008	B8III	10.17	.92	.64	2 2 2	.53	.21	.33	
4009	A1V	10.15	.31	.23	2 2 2	.51	.11	.19	
4010	A0V	8.52	.33	.17	2 2 2	.40	.05	.26	
4011	G8IV	9.57	1.22	1.31	2 2 3	.58	.18	.15	strong Fe
4012	K0III	8.36	1.22	1.01	2 2 2	.45	.14	.20	
4013	G7IV	8.92	.93	.81	2 2 3	.49	.19	.55	double
4014	A1V	11.03	.33	.32	2 2 2	.63	.22	.27	
4015	A0V	11.34	.63	.00	2 2 2	.44	.17	.17	ovlp
4016	F4	11.21	.72	.09	2 2 2	.44	.16	.19	ovlp
4017	G3V	11.03	.91	.51	2 3 2	.39	.16	.17	
4018	F5	11.53	.58	.06	2 2 2	.57	.16	.19	ovlp
4019	G8III	9.83	1.15	1.17	2 2 2	.43	.18	.22	
4020	F8V	10.92	.75	.27	2 2 2	.41	.15	.23	double ?
4021	B9V	11.26	.75	.23	2 2 2	.43	.17	.22	Ap
4022	A3V	11.25	.97	.82	2 2 2	.50	.22	.21	
4023	B9V	11.14	.35	.30	2 2 2	.67	.17	.20	Ap
4024	A6IV	10.90	.53	.36	2 2 2	.64	.24	.31	
4025	A8IV	10.54	.61	.32	2 2 2	.68	.22	.29	
4026	F0V	11.01	.57	.19	2 3 2	.35	.16	.16	
4027	A0V	12.94	.86	.46	2 2 2	.39	.14	.11	Ap ?
4028	F8III	11.78	.74	.13	2 2 2	.44	.21	.12	
4029	A8V	11.94	.59	.13	2 2 2	.40	.18	.20	
4030	B8V	12.35	.83	.32	2 2 2	.51	.26	.10	
4031	F8	11.76	.79	.18	2 2 2	.46	.17	.19	pec ?
4032	F2V	11.23	.77	.10	2 3 2	.36	.11	.23	
4033	B9V	11.05	.98	.31	2 2 2	.41	.23	.21	IV ?
4034	G2	11.34	.79	.22	2 2 2	.49	.20	.26	str G-band
4035	A	12.52	.97	.71	2 2 2	.44	.17	.18	ovlp
4036	K3V	12.33	.84	.25	2 2 2	.53	.22	.21	
4037	F2I	12.07	.48	.27	2 2 2	.45	.17	.11	
4038	G6	10.47	1.14	.54	2 2 2	.43	.20	.18	ovlp
4039	F	12.45	.60	.40	2 2 2	.49	.20	.10	
4040	K0V	11.74	.97	.71	2 2 2	.58	.27	.11	ovlp
4041	G8	11.23	.88	.46	2 2 2	.52	.28	.28	ovlp
4042	A5V	12.91	.77	.58	2 2 2	.52	.32	.36	ovlp
4043	K	12.30	.91	.31	2 2 2	.61	.36	.21	
4044	G0	12.49	.70	.14	2 2 2	.53	.21	.08	uxp
4045	A	12.27	.97	.00	2 2 2	.58	.21	.18	
4046	F	10.56	2.19	2.62	2 2 2	.41	.27	.17	ovlp
4047	F	11.72	.73	.11	2 2 2	.40	.18	.21	ovlp
4048	G8	10.94	1.50	1.50	2 2 2	.61	.34	.32	
4049	F2	11.30	.68	.13	2 2 2	.61	.25	.19	
4050	G2III	11.51	.77	.25	2 2 2	.64	.26	.26	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
4051	G0V	11.66	.88	.40	2 2 2	.56	.26	.25	
4052	F2	12.65	.71	.20	2 2 2	.74	.34	.28	
4053	A3V	12.87	.88	.62	2 2 2	.69	.29	.29	
4054	G3V	11.36	.93	.53	2 2 2	.66	.27	.30	
4055	A0V	12.29	.68	.50	2 2 2	.73	.33	.24	
4056	F0V	11.56	.45	.38	2 2 2	.67	.25	.18	ovlp
4057	A0V	12.06	.84	.63	2 2 2	.64	.25	.32	
4058	F0	11.95	.69	.17	2 2 2	.72	.31	.34	
4059	K	11.61	1.40	1.49	2 2 2	.76	.38	.18	uxp
4060	F0III	12.42	.87	.58	2 2 2	.79	.22	.39	
4061	A4V	12.11	.93	.67	2 2 2	.72	.36	.30	Ap(CrEu)
4062	K	12.43	1.05	.75	2 2 2	.64	.31	.27	ovlp
4063	K	12.31	.83	.60	2 2 2	.63	.45	.28	ovlp
4064		11.11	1.04	.72	2 2 2	.57	.27	.30	ovlp
4065	A3	12.08	1.06	.58	2 2 2	.60	.27	.25	double
4066	G5V	12.07	.91	.45	2 2 2	.61	.23	.25	
4067	A0	12.27	1.17	.79	2 2 2	.45	.28	.32	Ap ?
4068	G8V	11.33	.90	.26	2 2 2	.44	.20	.15	
4069	B8V	12.88	1.14	.49	2 2 2	.56	.29	.21	uxp
4070	G2	11.76	.89	.30	2 2 2	.49	.22	.20	
4071	F2V	11.66	.72	.23	2 2 2	.48	.21	.21	
4101		12.53	.92	.25	2 2 2	.41	.15	.17	
4102		13.04	.79	.02	2 2 2	.49	.07	.19	
4103		12.47	.85	.18	2 2 2	.47	.11	.18	
4104		12.10	.95	.47	2 2 2	.56	.20	.15	
4105		13.13	.75	.07	2 2 2	.39	.20	.08	
4106		12.95	1.16	.65	2 2 2	.50	.33	.10	
4107		12.58	.76	.32	2 2 2	.63	.23	.05	
4108		11.38	2.05	2.04	2 2 1	.58	.35	--	
4109		12.97	.77	.10	2 2 2	.52	.14	.01	
4110		12.21	.87	.18	2 2 2	.53	.32	.15	
4111		12.47	.77	.12	2 2 2	.53	.26	.21	
4112		12.32	.79	.05	2 2 2	.59	.31	.15	
4113		12.57	.67	.16	2 2 2	.72	.28	.19	
4114		12.16	.83	.19	2 2 2	.60	.32	.16	
4115		12.49	.67	.50	2 2 2	.56	.27	.21	
4116		12.36	.79	.01	2 2 2	.58	.21	.22	
4117		12.80	1.15	.44	2 2 2	.56	.21	.16	
4118		13.11	.99	-.06	2 2 2	.50	.25	.31	
4119		12.90	.86	.16	2 2 2	.49	.26	.10	
4120		12.78	1.11	.56	2 2 2	.48	.29	.23	
4121		12.59	1.11	.59	2 1 2	.35	--	.13	
4122		12.71	1.02	.80	2 1 2	.41	--	.14	
4123		12.77	.82	.63	2 1 2	.40	--	.11	
4124		12.78	1.59	1.17	2 1 1	.43	--	--	
4125		12.20	1.11	1.66	2 1 2	.53	--	.07	
4126		12.68	1.39	1.19	2 1 2	.57	--	.13	
4127		12.39	1.53	1.57	2 1 2	.53	--	.19	
4128		12.50	.61	.26	2 1 2	.57	--	.15	
4129		12.30	1.87	--	2 1 0	.57	--	--	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
4130		12.86	.81	.53	2 1 2	.42	--	.23	
4131		12.12	1.72	1.64	2 1 2	.45	--	.17	
4132		12.53	1.55	1.29	2 1 2	.51	--	.16	
4133		12.20	1.89	--	2 1 0	.60	--	--	
4134		10.00	3.24	--	2 1 0	.47	--	--	
4135		12.26	1.41	1.71	2 1 1	.65	--	--	
4136		12.60	.92	.04	2 1 2	.70	--	.10	
4301		13.11	.46	.12	1 1 2	--	--	.05	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
5001	B9V	10.57	.01	.58	2 2 2	.44	.29	.34	
5002	F0	6.67	0.43	0.00	0 0 0	--	--	--	ovxp
5003	K0IV:	9.53	1.16	.80	2 2 2	.40	.21	.31	
5004	A0V	9.28	.21	.17	2 2 2	.57	.09	.24	(A1V)
5005	A0V	10.51	.15	.15	2 2 2	.58	.21	.28	
5006	G8IV:	9.85	1.21	1.16	2 2 2	.54	.21	.25	diffuse
5007	B9V	8.29	-.30	-.29	1 1 2	--	--	.11	ApSi ?
5008	F2V	10.39	.66	.19	2 2 2	.48	.23	.25	
5009	K3III	10.26	1.12	1.10	2 2 2	.62	.22	.25	strong Fe
5010	G8IV:	10.20	1.28	1.37	2 2 2	.58	.24	.34	
5011	K0V	9.85	1.13	1.42	2 2 2	.61	.20	.36	
5012	A0V	10.48	.18	.34	2 2 2	.64	.19	.48	
5013	B7V	9.40	.30	-.23	2 2 2	.52	.14	.21	Be ?
5014	B9V	6.25	-0.08	-0.26	0 0 0	--	--	--	ovxp
5015	A5V	9.56	.40	.32	2 2 2	.62	.16	.30	ApSr
5016	A8V	10.08	.57	.20	2 2 2	.67	.21	.32	
5017	A4V	9.90	.34	.39	2 2 2	.60	.20	.37	
5018	B9III	10.68	.37	.10	2 2 2	.66	.13	.29	
5019	A2V	10.02	.36	.39	2 2 2	.70	.22	.45	double pg
5020	K4V	10.43	1.25	1.10	2 2 2	.51	.23	.23	
5021	A2V	11.62	.39	.66	2 2 3	.79	.24	.31	
5022	A0V	11.47	.30	.32	2 2 2	.71	.20	.20	Ap(SrCrEu)
5023	M4III	10.10	2.10	2.57	2 2 2	.51	.31	.25	
5024	A1V	11.71	.44	.29	2 2 2	.55	.14	.34	
5025	B9V	11.23	.30	.28	2 2 2	.74	.20	.39	Ap(Si) ?
5026	A7V	11.31	.49	.33	2 2 2	.65	.23	.35	
5027	F0V	11.06	.48	.31	2 2 2	.85	.27	.37	
5028	F2III	11.06	.39	.28	2 2 2	.81	.19	.32	
5029	A1V	11.70	.45	.67	2 2 2	.81	.10	.34	Ap
5030	F0V	12.01	.62	.16	2 2 2	.67	.20	.27	
5031	K	11.31	1.70	1.70	2 2 2	.64	.34	.26	
5032	G	11.47	1.42	1.20	2 2 2	.72	.34	.27	
5033	A1V	12.16	.74	.69	2 2 3	.77	.35	.47	double pg
5034		11.90	1.07	.56	2 2 2	.69	.34	.31	ovlp
5035	A0V	11.70	.94	.36	2 1 2	.75	--	.37	
5036	G0V	11.37	.73	.42	2 2 2	.63	.28	.36	
5037	G2III	11.34	.75	.34	2 2 2	.64	.25	.20	
5038	G1V	11.98	.81	.28	2 2 2	.70	.35	.30	
5039	A0V	12.91	.69	.47	2 2 2	.66	.37	.15	
5040	G0V	11.16	.77	.25	2 2 2	.56	.24	.29	
5041	A0V	12.04	.61	.64	2 2 2	.64	.30	.25	
5042	A0V	12.17	.55	.53	2 2 2	.57	.25	.27	
5043		11.69	.73	.29	2 2 2	.49	.25	.28	ovlp
5044	G8	11.73	.86	.36	2 2 2	.62	.19	.10	
5045	F2	11.66	.70	.29	2 2 2	.52	.25	.27	
5046	F8	12.16	.80	.24	2 2 2	.64	.20	.32	
5047	F5V	11.94	.76	.18	2 2 2	.53	.23	.32	
5048	G5	11.87	.72	.46	3 2 2	.45	.27	.19	
5049	G0V	11.93	.71	.06	2 2 2	.57	.24	.28	
5050	F0V	12.14	.62	.25	2 2 2	.68	.33	.32	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
5051	G2	12.80	.75	.23	2 2 2	.84	.30	.27	
5052	G4:	12.21	.79	.33	2 2 2	.78	.37	.30	ovlp
5053	G0:	11.97	.75	.27	2 2 2	.68	.31	.31	pec
5054	A	11.32	.40	.48	2 2 2	.72	.28	.39	ovlp
5055	K0V::	11.67	1.28	1.22	2 2 2	.84	.33	.29	uxp
5056	A0V	12.44	.60	.48	2 2 2	.91	.28	.33	ovlp
5057	G5III:	12.10	.82	.25	2 2 2	.87	.34	.25	ovlp
5058		11.99	.71	.29	2 2 2	.76	.26	.33	ovlp
5059	K	11.40	.90	.89	2 2 2	.79	.26	.40	
5060	K3V	10.36	1.57	2.10	2 2 2	.67	.33	.32	
5061	B8:	11.05	.43	-.30	3 2 2	.51	.25	.66	ovlp
5062	A	12.33	.43	.53	2 2 2	.80	.31	.34	ovlp
5063	G8	10.95	1.29	1.32	2 2 2	.81	.31	.49	double pg
5064	F2V:	11.86	.68	.31	2 3 2	.57	.16	.36	
5065	F5V:	11.35	.55	.31	2 2 2	.59	.18	.43	
5066	F4V	11.67	.66	.31	2 2 2	.57	.24	.40	
5067	G0V:	10.46	.84	.43	2 2 2	.54	.21	.32	double pg
5068	F2	11.92	.63	.25	2 2 2	.57	.27	.34	ovlp
5069	A	12.16	.57	.22	2 2 2	.64	.26	.24	ovlp
5070	B3	12.09	.60	.16	2 2 2	.60	.21	.33	
5071	G	12.19	.75	.30	2 2 2	.62	.20	.28	ovlp
5072	F0V	11.60	.59	.18	2 2 2	.53	.26	.32	
5073	G0	12.10	.82	.27	2 2 2	.58	.26	.24	
5074	G2I:	11.69	.73	.42	2 2 2	.70	.24	.36	
5075	F8V	11.44	.75	.10	2 2 2	.59	.22	.32	
5076	F2V	12.03	.69	.17	2 2 2	.50	.27	.26	
5077	K2V	11.39	1.39	1.27	2 2 2	.51	.21	.15	
5078	F5	11.74	.69	.35	2 2 2	.63	.20	.37	
5101		11.93	1.30	.80	2 2 2	.48	.23	.24	
5102		13.00	.70	.18	2 2 2	.72	.33	.14	
5103		12.71	1.03	.45	2 2 3	.89	.29	.30	
5104		13.15	1.02	.63	2 2 2	.60	.33	.15	
5105		11.89	.53	.19	3 2 2	.57	.33	.28	
5106		12.57	.65	.34	2 2 2	.61	.29	.27	
5107		12.25	.85	.50	2 2 2	.61	.29	.21	
5108		12.54	.64	.24	2 2 2	.59	.32	.26	
5109		12.73	.97	.47	2 2 2	.58	.27	.27	
5110		12.56	.84	.41	2 2 2	.56	.27	.35	
5111		12.71	.57	.22	2 2 2	.60	.19	.27	
5112		12.50	.63	.35	2 2 2	.61	.23	.34	
5113		11.79	1.64	1.84	2 2 2	.59	.25	.17	
5114		12.70	.87	.19	2 2 2	.62	.26	.32	
5115		12.41	1.00	.49	2 2 2	.64	.28	.37	
5116		12.85	.57	.51	2 2 2	.57	.25	.32	
5117		12.54	.43	-.11	2 2 2	.67	.24	.32	
5118		11.12	1.82	2.30	2 2 2	.61	.30	.10	
5119		12.36	.83	.35	2 2 2	.64	.28	.22	
5120		12.36	1.38	1.29	2 2 2	.73	.34	.24	
5121		12.04	1.27	1.09	2 2 2	.73	.31	.17	
5122		12.14	1.33	1.34	2 2 2	.82	.26	.30	

Section B6 - 5000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
5123		12.70	.82	.35	2 2 2	.79	.26	.21	
5124		13.26	.51	.40	2 2 2	.70	.27	.24	
5125		12.96	.61	.10	2 2 2	.80	.33	.26	
5126		12.27	.71	.20	2 2 2	.75	.26	.30	
5127		12.72	.52	.38	2 2 2	.85	.25	.41	
5128		12.61	.67	.65	2 2 2	.75	.22	.31	
5129		12.34	1.70	--	2 1 0	.64	--	--	
5130		12.05	1.51	1.62	2 1 2	.52	--	.18	
5131		12.59	.98	1.22	2 1 2	.66	--	.11	
5132		12.87	.92	.99	2 1 2	.68	--	.08	
5133		12.70	.96	1.21	2 1 2	.81	--	.29	
5134		12.21	1.28	1.56	2 1 2	.71	--	.17	
5135		12.42	1.85	--	2 1 0	.83	--	--	
5136		11.82	1.68	1.80	2 1 1	.64	--	--	
5137		12.63	1.63	--	2 1 0	.62	--	--	
5138		12.11	2.11	--	2 1 0	.39	--	--	
5139		12.53	1.38	1.40	2 1 2	.67	.00	.27	
5301		13.18	.19	.44	1 1 2	.00	.00	.29	
5701		12.20	1.28	.26	2 2 2	1.20	.31	.24	

Section C7 - 6000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
6001	A0V	7.56	0.02	0.02	0 0 0				
6002	K3III	9.97	1.12	.99	2 2 3	.08	.15	.02	
6003	B9IV	8.22	.23	-.17	2 2 2	.12	.01	.02	BpSi
6004	A1V	8.66	.14	.05	2 2 2	.16	.01	.07	
6005	G2IV	9.52	.74	.14	2 2 2	.20	.02	.19	
6006	A7V	9.82	.42	.10	2 2 2	.20	.11	.08	
6007	A3V	10.60	.38	.07	2 2 2	.18	.02	.17	
6008	A2V	9.21	.91	.17	2 2 2	.23	.01	.16	double
6009	F5	9.76	.66	.00	2 2 2	.25	.05	.17	ovlp
6010	K0III	8.69	1.22	.69	2 2 2	.23	.04	.14	
6011	G4III	8.43	.82	.37	2 2 2	.13	.02	.12	earlier ?
6012	A3V	10.95	.42	.10	2 2 2	.12	.04	.17	
6013	A8V	10.61	.40	.21	2 2 2	.18	.07	.19	
6014	O7I	9.90	1.30	-.09	2 2 2	.17	.04	.17	weak lines
6015	F5V	10.93	.71	-.12	2 2 2	.17	.01	.04	
6016	A2V	12.00	.41	.04	2 2 2	.19	.03	.06	ApSrCrEu
6017	F8:	11.44	.71	-.03	2 2 2	.24	.07	.04	uxp
6018	F0V	10.99	.62	.03	2 2 2	.20	.01	.10	
6019	G8III:	10.27	1.06	.25	2 2 2	.29	.05	.04	double
6020	F0IV	10.89	.54	-.10	2 2 2	.27	.07	.07	
6021	F0III	11.38	.62	-.08	2 2 2	.30	.01	.08	ApSr
6022	A0V	11.42	.43	.05	2 2 2	.19	.03	.04	
6023	F0V:	11.67	.54	-.06	2 2 2	.09	.01	.13	ovlp
6024	F2V:	12.08	.52	-.01	2 2 2	.17	.22	.17	
6025	G8	10.84	1.23	.83	2 2 2	.11	.10	.05	
									few lines
6026	O9:	10.79	1.20	.13	2 2 2	.07	.00	.02	
6027	F2V	11.79	.44	-.11	2 2 2	.03	.01	.10	
6028	G5V	12.39	.66	.04	2 2 2	.14	.07	.03	
6029	F5III	12.15	.42	-.02	2 2 2	.15	.08	.07	ovlp
6030	G8:	10.51	1.23	1.00	2 2 2	.12	.01	.07	
6031	B7:	11.78	1.10	.51	2 2 2	.04	.00	.06	
6032	K5V	12.16	1.20	.72	2 2 2	.13	.01	.03	
6033	F3V	12.11	.62	-.09	2 2 2	.21	.04	.06	
6034	G2I	12.01	.72	-.03	2 2 2	.16	.01	.09	
6035	G8V	11.64	.78	.11	2 2 2	.14	.03	.04	
6036	G0	12.42	.72	-.08	2 2 2	.17	.01	.11	uxp
6037	B	12.03	1.10	.09	2 2 2	.24	.04	.02	
6038	F7	11.41	.95	.19	2 2 2	.12	.02	.05	
6039	A7V	12.40	.79	.09	2 2 2	.14	.01	.10	
6040	G1	12.40	.85	.09	2 2 2	.22	.04	.03	
									ovlp
6041	B1	11.34	1.47	.02	2 2 2	.21	.05	.01	
6042	G0V	11.80	.67	-.09	2 2 2	.18	.01	.03	
6043	F2	12.52	.56	-.15	2 2 2	.14	.03	.06	
6044	G2:	12.39	.67	-.16	2 2 2	.18	.01	.04	
6045	G0	12.34	.70	-.08	2 2 2	.15	.02	.00	
6046	G0	12.08	.72	-.03	2 2 2	.20	.05	.07	
6047	G2	12.46	.74	.02	2 2 2	.23	.02	.05	
6048	F8	12.55	.62	-.11	2 2 2	.20	.03	.12	
6049	K5V	12.20	1.08	.80	2 2 2	.21	.09	.03	
6050	G8	11.43	1.86	1.55	2 2 2	.21	.07	.20	

Section C2 - 6000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
6051	K1:	12.63	.84	.13	2 2 2	.26	.07	.06	
6052	G1V	11.48	.60	.03	2 2 2	.29	.01	.00	
6053	G0V	11.47	.79	-.00	2 2 2	.25	.05	.05	
6054	G5:	12.14	.78	-.04	2 2 2	.30	.03	.05	
6055	A8V	12.10	.50	-.17	2 2 2	.39	.03	.05	
6056	F2V	11.86	.65	.02	2 2 2	.24	.01	.13	
6057	G5	11.60	.84	.25	2 2 2	.16	.01	.05	
6058	F0V	12.41	.60	-.07	2 2 2	.24	.02	.01	
6059	G5	12.24	.80	.00	2 2 2	.26	.04	.02	
6060	M5	11.84	2.27	1.51	2 2 2	.32	.04	.05	
6061	G0	12.22	.73	-.11	2 2 2	.35	.01	.06	
6101		12.54	.73	-.09	2 2 2	.36	.00	.09	
6102		12.89	.72	-.11	2 2 2	.30	.02	.04	
6103		12.04	1.34	.79	2 2 2	.14	.01	.15	
6104		12.99	.67	-.23	2 2 2	.24	.02	.11	
6105		12.86	.75	.06	2 2 2	.26	.10	.14	
6106		12.68	.71	-.20	2 2 2	.19	.07	.01	
6107		12.87	.72	-.21	2 2 2	.28	.00	.03	
6108		12.97	.66	-.16	2 2 2	.29	.02	.09	
6109		12.77	.68	-.19	2 2 2	.29	.02	.06	
6110		13.25	.84	-.16	2 2 2	.25	.00	.03	
6111		12.99	.91	.02	2 2 2	.26	.03	.01	
6112		12.58	.90	.00	2 2 2	.36	.09	.09	
6113		10.84	.40	.22	2 2 2	.10	.02	.26	double pg
6114		12.59	.71	-.06	2 2 2	.21	.02	.06	
6115		12.26	.95	.23	2 2 2	.26	.04	.15	
6116		12.79	.61	-.10	2 2 2	.26	.01	.03	
6117		13.28	.84	-.07	2 2 2	.20	.05	.00	
6118		12.77	.77	.08	2 2 2	.29	.00	.08	
6119		13.08	.82	.08	2 2 2	.20	.06	.07	
6120		13.39	.72	-.03	2 2 2	.11	.00	.03	
6121		12.21	1.10	-.32	2 2 2	.17	.02	.04	
6122		12.72	.81	-.03	2 2 2	.07	.02	.08	
6123		12.78	.79	.26	2 2 2	.18	.00	.05	
6124		12.24	.65	-.13	2 2 2	.13	.01	.02	
6125		13.09	.76	-.03	2 2 2	.14	.03	.11	
6126		12.11	.70	.12	2 2 2	.19	.02	.10	
6127		13.09	.91	.00	2 2 2	.23	.06	.03	
6128		12.95	.68	-.11	2 2 2	.19	.04	.08	
6129		13.04	.83	-.18	2 2 2	.22	.08	.17	
6130		11.62	.61	.17	2 2 2	.11	.05	.03	
6131		10.83	.09	.98	2 2 2	.04	.34	.06	double pg
6132		12.43	.77	.14	2 2 2	.18	.02	.03	
6133		12.83	.74	-.21	2 2 2	.18	.01	.08	
6134		12.92	.85	.11	2 2 2	.16	.10	.04	double pg
6135		12.88	1.38	.97	2 1 2	.25	--	.11	
6136		--	--	--	2 0 1	.43	--	--	
6137		--	--	--	2 0 0	.28	--	--	
6138		--	--	--	2 0 0	.30	--	--	
6701		--	--	--	2 0 0	.27	--	--	
6702		11.96	.86	-.26	2 1 2	.14	--	.22	

Section C3 - 7000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
7001	K0III	9.64	1.27	1.05	2 2 2	.26	.06	.10	
7002	K1III	10.05	1.07	.85	2 2 2	.19	.10	.04	
7003	A1V	8.74	.36	.03	2 2 2	.22	.03	.02	
7004	A2V	10.52	.31	.05	2 2 2	.22	.02	.12	
7005	F7V	10.30	.68	-.09	2 2 2	.20	.04	.09	
7006	A4V	10.66	.40	.06	2 2 2	.20	.01	.09	
7007	A0V	9.62	.14	.02	2 2 2	.26	.03	.14	
7008	F0III	10.56	.60	.01	2 2 2	.28	.06	.12	
7009	A6V	11.22	.52	.01	2 2 2	.07	.05	.05	
7010	A0V	11.21	.39	.07	2 2 2	.22	.06	.06	ApSrCr(Eu)
7011	A2III	10.90	.48	.11	2 2 2	.19	.09	.17	
7012	K3III	9.69	1.41	1.60	2 2 2	.13	.01	.13	
7013	F7V	9.53	.61	.04	2 2 2	.10	.02	.16	pec ?
7014	F6V	9.99	.63	.02	2 2 2	.24	.11	.14	
7015	A7V	8.29	.20	.19	2 2 2	.18	.05	.17	
7016	A5III	11.00	.42	.07	2 2 2	.23	.00	.04	new lines
7017	A1V	10.53	.23	.08	2 2 2	.22	.04	.20	
7018	B9V	10.53	.72	.17	2 2 2	.17	.01	.16	
7019	B2	9.15	1.05	-.28	2 2 2	.25	.03	.01	double
7020	A2V	10.74	.28	.22	2 2 2	.18	.02	.09	
7021	A8IV	10.49	.47	-.03	2 2 2	.19	.08	.14	
7022	A2IV	10.98	.27	.17	2 2 2	.22	.12	.07	
7023	A5V	10.74	.44	.07	2 2 2	.22	.05	.15	
7024	G1V	10.73	.75	-.03	2 2 2	.20	.09	.11	
7025	G0V	10.43	.66	.09	2 2 2	.27	.11	.12	
7026	B9V	11.36	.73	-.10	2 2 2	.21	.05	.14	?
7027	A0V	11.77	.34	.18	2 2 2	.20	.00	.07	
7028	F0V	12.37	.63	-.15	2 2 2	.32	.09	.00	pec ?
7029	A0V	11.94	1.22	.66	2 2 2	.33	.10	.12	ApSrII
7030	G8	12.04	.82	.13	2 2 2	.26	.02	.05	
7031	M	11.16	2.42	--	2 2 0	.21	.07	--	ovlp
7032	K2:	12.37	.70	-.02	2 2 2	.33	.07	.00	
7033	F	11.98	.69	-.05	2 2 2	.24	.10	.07	ovlp
7034	F5	11.44	.54	.05	2 2 2	.25	.02	.07	
7035	F8V	11.45	.68	.07	2 2 2	.22	.00	.10	
7036	G0	12.74	.58	-.06	2 2 2	.28	.01	.11	uxp
7037	F0	11.93	.66	-.18	2 2 2	.29	.01	.07	ovlp
7038	F4V	11.74	.87	.10	2 2 2	.15	.05	.01	
7039	M1III	11.18	1.43	1.22	2 2 2	.18	.11	.09	
7040	F5III	11.97	.70	-.05	2 2 2	.20	.00	.02	
7041	G2	12.55	.65	-.05	2 2 2	.29	.04	.06	
7042	K3V	10.35	1.63	1.42	2 2 2	.16	.10	.13	
7043	A3V	12.38	.45	.07	2 2 2	.20	.07	.06	ovlp
7044	B9V	11.91	.94	.29	2 2 2	.15	.04	.12	ovlp
7045	G	11.01	1.52	1.20	2 2 2	.21	.09	.02	ovlp
7046	G3	10.94	.79	.17	2 3 2	.26	.08	.17	
7047	F0III	11.96	.54	-.07	2 2 2	.31	.00	.07	
7048	G	12.06	.51	.01	2 2 3	.23	.07	.38	double
7049	G1	12.14	.64	-.09	2 2 2	.28	.11	.06	
7050	F8III	11.89	.66	-.02	2 2 2	.33	.14	.10	pec ?

Section C3 - 7000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
7051	G8III	12.31	.87	.05	2 2 2	.35	.01	.07	
7052	A1V	11.45	.52	-.01	2 2 2	.34	.10	.08	ovlp
7053	K0	11.80	.81	-.05	2 2 2	.26	.02	.03	
7054	A5V	11.75	.44	.02	2 2 2	.20	.03	.08	
7055	F8	11.17	.66	-.01	2 2 2	.23	.09	.13	
7056	F5V	12.21	.63	-.11	2 2 2	.25	.09	.13	
7057	F	12.73	1.26	.30	2 2 2	.30	.12	.05	ovlp
7058	G	12.92	.66	-.04	2 2 2	.36	.05	.11	uxp
7059	O8V	11.64	1.19	.11	2 2 2	.28	.00	.02	
7060	F2III	12.13	.65	-.03	2 2 2	.17	.02	.01	ovlp
7061	B9V	11.69	.04	.28	2 2 2	.21	.02	.05	
7062	B8III	11.00	1.04	.40	2 2 2	.19	.05	.08	
7063	G6	12.04	.86	.19	2 2 2	.20	.11	.02	
7064	G0	12.84	.79	-.06	2 2 2	.25	.10	.10	uxp
7065	F8	12.24	.52	-.09	2 2 2	.23	.06	.04	
7066	A0	12.44	.93	.02	2 2 2	.17	.02	.05	
7067	G2	12.53	.65	-.09	2 2 2	.21	.07	.05	
7068	F2	11.86	.59	-.11	2 2 2	.21	.02	.09	
7101		12.38	.66	-.18	2 2 2	.21	.04	.02	
7102		12.13	.47	.02	2 2 2	.26	.10	.09	
7103		12.00	.63	-.07	2 2 2	.27	.02	.05	
7104		12.81	.80	.01	2 2 2	.23	.09	.12	
7105		13.11	.62	-.08	2 2 2	.32	.08	.12	
7106		13.36	.76	-.22	2 2 2	.21	.10	.16	
7107		12.10	1.05	.36	2 2 2	.28	.07	.02	
7108		12.88	.70	-.17	2 2 2	.20	.05	.08	
7109		12.77	.93	.15	2 2 2	.26	.08	.08	
7110		12.57	.61	-.03	2 3 2	.21	.01	.08	
7111		12.03	.83	.34	2 2 2	.22	.07	.05	
7112		12.92	.98	.66	2 2 2	.22	.07	.01	
7113		13.12	.79	-.02	2 2 2	.33	.04	.11	
7114		13.02	.66	.02	2 2 2	.22	.10	.03	
7115		12.89	.75	.01	2 2 2	.31	.17	.16	
7116		13.13	.59	-.10	2 2 2	.30	.11	.00	
7117		13.01	.77	.07	2 2 2	.33	.10	.01	
7118		13.08	.84	.13	2 2 2	.29	.12	.03	
7119		12.69	.76	-.08	2 2 2	.18	.09	.00	
7120		12.71	.98	.25	2 2 2	.16	.07	.05	
7121		11.89	.77	-.02	2 2 2	.10	.08	.09	
7122		12.15	.52	-.04	2 2 2	.20	.06	.06	
7123		12.66	.83	-.03	2 2 2	.23	.01	.00	
7124		12.81	.82	.23	2 2 2	.21	.01	.02	
7125		12.90	.84	.26	2 2 2	.14	.01	.10	
7126		12.75	.69	-.05	2 2 2	.20	.04	.14	
7127		12.51	.90	.18	2 2 2	.26	.16	.05	
7128		13.22	.76	-.04	2 2 2	.21	.10	.01	
7129		12.73	.62	-.07	2 2 2	.23	.13	.06	
7130		12.43	.64	-.10	2 2 2	.21	.01	.02	
7131		13.08	.74	-.16	2 2 2	.32	.01	.08	
7132		12.98	.72	-.24	2 2 2	.30	.03	.08	

Section C3 - 7000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
7133		13.11	.03	-.10	2 2 2	.29	.03	.05	
7134		-13.25	.77	-.06	2 2 3	.31	.00	.10	
7135		13.07	.67	+.32	2 2 2	.34	.03	.15	
7136		12.80	1.41	.81	2 2 2	.33	.06	.09	double pg
7137		--	--	--	2 0 1	.30	--	--	
7138		12.36	1.93	--	2 1 0	.19			
7139		12.99	1.23	.67	2 1 2	.35	--	.02	+

Section C4 - 8000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
8001	G8III	8.40	1.01	.71	2 2 2	.17	.06	.15	
8002	F9IV	9.80	.82	.43	2 2 2	.22	.08	.13	
8003	A3V	11.21	.37	.13	2 2 2	.17	.05	.08	
8004	F2V	10.32	.59	.04	2 2 2	.23	.10	.04	
8005	K1III	10.10	1.12	.05	2 2 2	.15	.04	1.00	
8006	F0IV	9.86	.46	.90	2 2 2	.09	.03	.09	
8007	G9IV	9.99	.96	.38	2 2 2	.10	.07	.04	diffuse ?
8008	A8IV	9.68	.39	.25	2 2 2	.17	.02	.08	
8009	A0V	10.55	.13	.10	2 2 2	.17	.12	.11	
8010	A6V	9.19	.35	.05	2 2 2	.17	.07	.05	
8011	A5V	10.59	.44	.22	2 2 2	.25	.09	.11	A0mA4-A8 ?
8012	A6V	9.30	.32	.22	2 2 2	.21	.09	.17	
8013	B9V	9.67	.09	.06	2 2 2	.26	.05	.11	(Si)
8014	A1V	8.02	.21	.13	2 2 2	.20	.02	.15	
8015	A0V	9.47	.17	.14	2 2 2	.25	.04	.15	
8016	K0III	10.03	.90	.66	2 2 2	.32	.13	.18	
8017	F5V	11.16	.55	.02	2 2 2	.19	.11	.14	
8018	F9	11.46	.74	-.02	2 2 2	.23	.06	.08	strong Fe
8019	G5	11.19	.77	.32	2 2 2	.26	.12	.09	
8020	A2V	11.53	.87	.53	2 2 2	.29	.11	.16	Ap
8021	A0V	11.98	.58	.31	2 2 2	.30	.09	.11	
8022	F7V	10.53	.54	.09	2 2 2	.29	.10	.20	
8023	G5V	10.58	1.00	.66	2 2 2	.27	.13	.17	
8024	B0V	10.29	.65	-.21	2 2 2	.30	.11	.21	
8025	G0V	11.49	.59	.21	2 2 2	.31	.15	.20	uxp
8026	A0IV	11.02	.26	.26	2 2 2	.29	.11	.20	ApSr
8027	G4	11.02	.66	.09	2 2 2	.26	.10	.17	
8028	O8V	11.42	1.08	-.23	2 2 2	.20	.11	.02	
8029	F0	12.07	.54	-.01	2 2 2	.22	.09	.10	III ?
8030	G5III	11.54	.80	.12	2 3 2	.18	.12	.05	
8031	G8IV	12.02	.75	.11	2 2 2	.17	.12	.01	
8032	F0V	11.95	.53	-.14	2 2 2	.19	.02	.02	
8033	F8	12.21	.75	.14	2 2 3	.27	.03	.10	ovlp
8034	A0V	12.25	.64	.28	2 2 2	.33	.07	.15	
8035	G	11.28	1.43	1.06	2 2 2	.20	.23	.05	?
8036	G5	11.50	.70	.22	2 2 2	.20	.08	.15	
8037	F2	11.58	.74	.18	3 2 2	.21	.08	.09	
8038	F2III	12.00	.59	-.07	2 2 2	.30	.07	.09	
8039	F5	12.22	.61	-.01	2 2 2	.25	.11	.05	
8040	B	13.02	.70	.35	2 2 2	.27	.13	.04	uxp
8041	A	12.47	.52	-.03	2 2 2	.31	.08	.03	ovlp
8042	K5III	11.79	.92	.68	2 2 2	.17	.14	.06	later ?
8043	B9IV	11.74	.73	.06	2 2 2	.30	.12	.17	
8044	G0	11.92	.72	-.04	2 2 2	.20	.12	.16	
8045	F5	12.75	.62	.00	2 2 2	.31	.06	.13	uxp
8046	G8V	11.94	.92	.30	2 2 2	.25	.21	.18	
8047	B9V	12.00	.56	.07	2 2 2	.20	.23	.11	
8048	K	12.88	.79	.07	2 2 2	.27	.03	.09	too faint
8049	F2V	12.61	.63	-.11	2 2 2	.36	.06	.15	
8050	G8	12.27	.97	.26	2 2 2	.26	.14	.11	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
8051	K	12.30	1.24	1.05	2 2 2	.35	.10	.21	
8052	A3V	12.26	.62	.32	2 2 2	.35	.11	.17	
8053	F8V	11.72	.67	.08	2 2 2	.38	.05	.12	
8054	A0V	11.89	.66	-.03	2 2 2	.31	.15	.26	
8055	K0III	10.49	1.68	1.42	2 2 2	.25	.18	.17	
8101		12.86	.81	.24	2 2 2	.38	.11	.03	
8102		12.56	.76	.05	2 2 2	.38	.09	.15	
8103		12.89	.70	-.06	2 2 2	.33	.11	.10	
8104		12.89	.83	.14	2 2 2	.30	.17	.05	
8105		13.02	.68	.01	2 2 2	.26	.08	.08	
8106		12.94	.71	.08	2 2 2	.31	.08	.11	
8107		12.37	.71	.15	2 2 2	.39	.11	.08	
8108		12.98	.83	.13	2 2 2	.41	.13	.15	
8109		13.21	.85	.22	2 2 2	.20	.09	.03	
8110		12.95	.74	-.04	2 2 2	.14	.02	.04	
8111		12.81	.63	-.08	2 2 2	.25	.05	.14	
8112		12.30	.69	.14	2 2 2	.32	.09	.04	
8113		12.73	.89	.02	2 2 2	.34	.13	.02	
8114		12.50	1.22	.72	2 2 2	.31	.11	.05	
8115		12.81	.75	-.06	2 2 2	.26	.11	.07	
8116		12.20	.68	-.08	2 2 2	.33	.09	.06	double pg
8117		12.91	.79	-.05	2 2 2	.07	.01	.05	
8118		12.71	.67	-.02	2 2 2	.10	.01	.08	
8119		12.80	.68	-.16	2 2 2	.19	.06	.02	
8120		12.84	.59	-.10	2 2 2	.10	.07	.04	
8121		13.11	.72	-.10	2 2 2	.27	.06	.00	
8122		12.59	1.37	.83	2 2 2	.26	.12	.11	
8123		12.14	.76	.20	2 2 2	.11	.11	.03	
8124		12.89	.71	-.01	2 2 2	.28	.11	.04	
8125		12.39	2.28	--	2 1 0	.23	--	--	
8126		12.39	1.92	1.17	2 1 2	.25	--	.15	
8127		12.84	.68	.67	2 1 2	.40	--	.04	

Section C5 - 9000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
9001	A9IV	9.33	.52	.07	2 2 2	.26	.13	.11	
9002	F2IV	10.47	.59	.14	2 2 2	.29	.15	.10	
9003	B6V	10.94	.31	.11	1 2 2	--	.17	.18	Ap
9004	A0V	9.44	.37	.29	2 2 2	.39	.17	.11	Ap/double
9005	B1III	8.46	.65	-.30	2 2 2	.27	.06	.17	
9006	F2V	10.03	.59	.10	2 2 2	.39	.12	.28	
9007	G9III	8.34	1.22	1.03	2 2 2	.31	.11	.22	
9008	A7V	10.57	.51	.16	2 2 2	.29	.11	.20	
9011	K3III	8.62	1.42	1.61	2 2 2	.27	.11	.16	
9012	A0V	9.00	.21	.14	2 2 2	.28	.08	.13	
9013	F1V	10.07	.56	.33	2 2 2	.35	.20	.23	Am ?
9014	F0V	10.14	.48	.25	2 2 2	.33	.12	.17	
9015	A2V	9.08	.28	.28	2 2 2	.38	.15	.21	ApSi4200
9016	A1IV	10.80	.44	.33	2 2 2	.39	.19	.28	
9017	G1IV	8.95	.96	.56	2 2 2	.39	.12	.19	
9018	G0V:	10.68	.67	.21	2 2 2	.44	.18	.24	
9019	K0III:	10.18	1.25	1.28	2 2 2	.35	.19	.17	ovlp
9020	A0V	11.12	.55	.36	2 2 2	.40	.22	.11	
9021	B7IV	10.67	.39	.01	2 2 2	.28	.13	.21	
9022	A0V	11.39	.82	.58	2 2 2	.32	.12	.14	
9023	K7IV	9.71	2.16	2.59	2 2 2	.31	.19	.12	
9024	A4III	11.52	.86	.83	2 2 2	.25	.20	.23	
9025	B9V	11.57	.58	-.11	2 2 2	.42	.07	.15	BpSi
9026	A0V	12.48	.62	.48	2 2 2	.50	.19	.29	
9027	A1V:	11.00	.50	.39	2 2 2	.41	.16	.26	Ap (e?)
9028	F2III:	11.57	.75	.29	2 2 2	.23	.14	.17	
9029	G5V	11.63	.72	.27	2 2 2	.28	.14	.22	
9030	F2III:	11.54	.56	.15	2 2 2	.33	.13	.16	
9031	K	11.34	1.57	1.46	2 2 2	.27	.11	.03	ovlp ?
9032	G0V	12.15	.68	.14	2 2 2	.34	.13	.25	
9033	K	11.19	1.55	1.14	2 2 2	.34	.20	.23	uxp
9034	K	11.68	1.61	1.34	2 2 2	.45	.13	.19	uxp
9035	F5:	11.56	.69	.34	2 2 2	.42	.15	.12	ovlp
9036	B	11.09	-.57	-.06	2 2 2	.40	.11	.16	ovlp
9037	G2V	10.64	2.03	.21	2 2 2	.29	.17	.20	
9038	K0:	11.60	1.75	1.42	2 2 2	.34	.14	.10	uxp
9039	F0V	12.14	.61	.03	2 2 2	.41	.16	.11	
9040	K:	11.98	1.00	.71	2 2 2	.38	.23	.20	uxp
9041	M:	11.17	2.16	2.23	2 2 1	.37	.22	--	uxp
9042	G0V	11.70	.67	.10	2 2 2	.26	.13	.23	
9043	F5:	11.36	.69	.35	2 2 2	.40	.17	.09	
9044	F0	12.45	.69	.05	2 2 2	.40	.12	.17	
9045	K	12.51	.87	.13	2 2 2	.33	.24	.19	uxp
9046	G5:	12.45	.84	.15	2 2 2	.41	.15	.21	
9047	F2V	11.27	.59	.17	2 2 2	.37	.12	.17	
9048	A0V	12.64	.64	.57	2 2 2	.50	.22	.11	
9049	G0V	11.64	.70	.16	2 2 2	.43	.18	.20	
9050	A0V:	12.40	.89	.71	2 2 2	.40	.21	.12	
9051	F2V	12.02	.54	.17	2 2 2	.36	.15	.23	
9052	A3V	12.59	.74	.53	2 2 2	.46	.14	.23	

Section C5 - 9000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
9053	A:	12.84	.91	.39	2 2 2	.44	.12	.09	ovlp
9054	F4V	12.47	.64	.00	2 2 2	.47	.22	.11	
9055	F5	12.23	.66	.20	2 2 2	.46	.17	.24	pec ?
9056	G	12.11	.84	.41	2 2 2	.41	.19	.26	weaklined
9057	B5:	11.52	.52	.06	2 2 2	.40	.17	.35	ovlp
9058		12.61	.59	.11	2 2 2	.55	.07	.20	ovlp
9059	F8V	12.33	.62	.07	2 2 2	.46	.11	.23	
9060	G0:	12.40	.65	.13	2 2 2	.38	.23	.25	double
9061	B7V	12.63	.78	.69	2 2 2	.40	.22	.16	
9062	F2	12.66	.68	.08	2 2 2	.47	.19	.14	
9063	F3	11.59	.67	.16	2 2 2	.37	.18	.22	
9064	G5V:	12.38	.76	.27	2 2 2	.53	.19	.15	
9065	F2III:	12.67	.69	.10	2 2 2	.47	.19	.22	ovlp
9066	G5	12.15	.81	.35	2 2 2	.45	.21	.14	
9067	A9III	11.28	.72	.31	2 2 2	.43	.20	.26	
9068	F2V:	12.46	.70	.19	2 2 2	.44	.25	.13	
9069	M0:	11.52	1.60	1.45	2 2 2	.49	.25	.22	uxp
9070	A8	11.08	.60	.22	2 2 2	.44	.20	.20	ovlp
9071	K0:	10.86	1.04	.67	2 2 2	.42	.10	.12	diffuse
9101		12.38	.86	.22	2 2 2	.45	.24	.24	
9102		12.31	.59	.18	2 2 2	.35	.27	.15	
9103		13.02	.69	.48	2 2 2	.36	.00	.17	double pg
9104		13.03	.89	.30	2 2 2	.35	.15	.15	
9105		12.47	1.00	.62	2 2 2	.44	.16	.04	
9106		12.81	.89	.17	2 2 2	.54	.21	.27	
9107		12.32	1.18	.80	2 2 2	.47	.27	.03	
9108		12.78	.83	.26	2 2 2	.55	.22	.21	
9109		12.79	.91	.45	2 2 2	.44	.13	.03	
9110		12.23	1.78	1.27	2 2 2	.36	.15	.05	
9111		12.49	.69	.13	2 2 2	.34	.14	.14	
9112		12.84	.83	.36	2 2 2	.42	.17	.17	
9113		13.01	.78	.37	2 2 2	.37	.20	.18	
9114		12.74	.67	.17	2 2 2	.42	.12	.06	
9115		12.84	.83	.54	2 2 2	.35	.13	.11	
9116		12.80	.70	-.04	2 2 2	.39	.03	.10	
9117		12.79	1.03	.74	2 2 2	.42	.27	.12	
9118		11.24	2.01	2.30	2 2 1	.35	.14	--	
9119		12.95	.72	.06	2 2 2	.40	.15	.16	
9120		12.13	.95	.48	2 2 2	.34	.15	.15	
9121		12.70	.83	.03	2 2 2	.40	.10	.08	
9122		12.45	.82	.21	2 2 2	.42	.16	.11	
9123		13.11	.77	-.02	2 2 2	.46	.11	.06	
9125		13.02	.76	.26	2 1 2	.32	--	.19	
9126		12.34	1.84	1.45	2 1 1	.38	--	--	
9127		12.69	2.27	--	2 1 0	.39	--	--	
9128		12.54	1.52	1.36	2 1 2	.44	--	.07	
9129		12.13	.56	.29	2 1 2	.49	--	.47	double pg
9130		12.80	1.01	.52	2 1 2	.41	--	.08	
9131		12.41	1.65	1.46	2 1 1	.45	--	--	
9132		13.03	.92	.30	2 1 2	.45	--	.08	

Section C5 - 9000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
9133		13.01	.99	.82	2 1 2	.48	--	.19	
9134		12.72	1.37	1.24	2 1 2	.39	--	.14	
9135		11.43	1.72	1.75	2 1 2	.28	--	.07	
9136		12.36	1.47	--	1 1 0	--	--	--	
9137		12.55	1.57	1.37	2 1 1	.42	--	--	
9138		12.60	1.87	--	2 1 0	.39	--	--	
9139		12.65	1.65	1.21	2 1 2	.46	--	.14	
9140		11.95	1.74	1.79	2 1 2	.42	--	.13	
9141		12.60	1.95	--	2 1 0	.56	--	--	
9142		12.55	1.85	--	2 1 0	.56	--	--	double pg

Section C6 - 10000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_b	σ_u	notes
10001	A3V	9.95	.29	.24	2 2 2	.36	.09	.23	
10002	A6V	9.34	.52	.19	2 2 3	.27	.10	.21	ApSr
10003	F4V	10.59	.60	.20	2 2 2	.29	.18	.24	pec Mn, Sr
10004	A6V	9.49	.33	.35	2 2 2	.35	.08	.26	
10005	F7V	10.42	.60	.20	2 2 2	.29	.19	.20	
10006	A2III	11.18	.37	.39	2 2 2	.36	.18	.21	ApSi ?
10007	K0IV	10.09	.95	.74	2 2 2	.27	.11	.04	
10008	F0V	10.88	.42	.40	2 2 2	.27	.17	.21	
10009	K1III	9.22	1.06	.93	2 2 2	.33	.14	.21	
10010	B9V	9.52	.47	.12	2 2 2	.30	.13	.17	double pg
10011	B9V	10.87	.37	.26	2 2 2	.32	.15	.33	
10012	F2V	9.21	.44	.12	2 2 2	.31	.09	.18	
10013	F0V	10.83	.50	.47	2 2 2	.37	.16	.43	
10014	F4IV	9.85	.42	.19	2 2 2	.34	.12	.34	
10015	A0V	10.01	-.08	.19	2 2 2	.29	.11	.33	
10016	A1V	12.63	.61	.52	2 2 2	.39	.21	.21	
10017	A5V	11.50	.43	.31	2 2 2	.32	.20	.28	ApCrSrEu
10018	G2IV:	10.90	.61	.28	2 2 2	.38	.22	.23	
10019	A6V	11.06	.28	.26	2 2 2	.26	.19	.42	
10020	A7IV	11.40	.24	.40	2 2 2	.34	.16	.24	
10021	F0V	11.35	.40	.23	2 2 2	.32	.20	.35	
10022	G8:	11.85	1.61	1.27	2 2 2	.36	.18	.28	
10023	F7:	13.09	.69	.18	2 2 2	.33	.01	.25	
10024	K0	11.59	.89	.56	2 2 2	.35	.12	.11	
10025	B9	12.34	.88	.53	2 2 2	.37	.12	.12	
10026	B9Vn	12.21	.50	.57	2 2 2	.31	.13	.21	broadlined
10027	G8:	12.15	.87	.54	2 2 2	.30	.13	.11	ovlp
10028	G5:	13.08	.67	.18	2 2 2	.38	.28	.06	
10029	G7V:	12.66	.66	.13	2 2 2	.42	.23	.16	
10030	G0V	11.92	.53	.17	2 2 2	.34	.15	.24	ovlp
10031	F2IV:	11.96	.53	.15	2 2 2	.28	.15	.21	
10032	F5III:	11.53	.64	.11	2 2 2	.38	.15	.19	ovlp
10033	M4:	11.31	2.96	--	2 2 0	.24	.19	--	uxp
10034	A4V	12.15	.68	.44	2 2 2	.37	.21	.10	ovlp
10035	G8	11.22	1.59	1.26	2 2 2	.36	.24	.31	ovlp
10036	F1III	12.37	.57	.30	2 2 2	.47	.21	.10	double pg
10037	G1:	12.94	.78	.25	2 2 2	.39	.15	.12	
10038	A3V	12.29	.79	.74	2 2 2	.41	.13	.28	
10039	G5V	10.67	1.50	1.39	2 2 2	.31	.27	.15	
10040	G8	11.74	.78	.53	2 2 2	.31	.17	.26	double pg
10041	F0V	11.82	.46	.48	2 2 2	.40	.26	.33	double pg
10042	F0V	11.93	.41	.21	2 3 2	.37	.13	.17	ovlp
10043	M	11.32	1.99	--	2 2 0	.30	.28	--	pec / ovlp
10044	G8	12.58	.67	.10	2 2 2	.34	.20	.17	
10045	A2V	12.42	.74	.69	2 2 2	.36	.21	.21	
10046	G5	12.41	.70	.17	2 2 2	.35	.14	.15	
10047	K	12.14	.73	.11	2 2 2	.36	.15	.13	uxp / ovlp
10048	F0V	11.12	.44	.34	2 2 2	.32	.13	.23	
10049	A6V	12.39	.54	.58	2 2 2	.42	.17	.43	
10050	A3V	12.26	.31	.47	2 2 2	.35	.09	.30	double pg

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
10051	A0V	12.41	.49	.78	2 2 2	.51	.01	.35	double pg
10052	F0V	12.51	.47	.17	2 2 2	.33	.19	.32	
10053	F5III	11.33	.49	.23	2 2 2	.37	.19	.31	
10054	F5:	12.13	.45	.32	2 2 2	.36	.25	.27	
10055	A0V	12.25	.66	.90	2 2 2	.37	.22	.25	ovlp
10056	A0V	11.85	.80	.78	2 2 2	.36	.18	.42	
10057	G1V	11.16	.55	.31	2 2 2	.32	.14	.40	
10058	F2	12.07	.59	.12	2 2 2	.39	.19	.26	
10059	A	13.28	.67	.48	2 2 2	.37	.17	.27	uxp
10060	M0:	11.34	1.76	2.15	2 2 2	.35	.22	.21	double
10061	G4V	11.60	.54	.38	2 2 2	.36	.22	.40	metal weak
10062	A1V	13.07	.56	.63	2 2 2	.38	.27	.33	
10063	A0V	12.53	.53	.45	2 2 2	.39	.25	.29	ApSi4200
10064	G	12.62	.58	.37	2 2 2	.36	.18	.34	uxp
10065	K0:	12.08	.59	.21	2 2 2	.38	.29	.21	
10066	K:	10.95	.84	.72	2 2 2	.34	.18	.27	ovlp
10067	F2V	12.40	.48	.31	2 2 2	.39	.24	.30	
10068	F	12.36	.87	.54	2 2 2	.41	.29	.14	composite?
10069	A	13.21	.86	.46	2 2 2	.41	.14	.17	uxp
10070	G0V	11.80	.64	.38	2 2 2	.30	.22	.23	
10071	K:	12.32	.93	.69	2 2 2	.52	.13	.32	ovlp
10101		13.14	.72	.71	2 2 2	.37	.21	.31	
10102		12.83	.80	.58	2 2 2	.47	.21	.37	
10103		12.76	.47	.25	2 2 2	.44	.19	.32	double pg
10104		12.79	.66	.40	2 2 2	.42	.15	.22	
10105		13.19	.70	.19	2 2 2	.36	.14	.18	
10106		12.65	.81	.48	2 2 2	.34	.18	.19	
10107		12.85	.52	.25	2 2 2	.29	.18	.37	
10108		13.10	.46	.35	2 2 2	.41	.22	.28	
10109		13.13	.67	.15	2 2 2	.35	.12	.30	
10110		12.79	.61	.14	2 2 2	.37	.21	.09	
10111		12.30	1.73	1.28	2 2 2	.38	.22	.01	
10112		13.07	.82	.57	2 2 2	.34	.15	.24	
10113		12.78	.81	.26	2 2 2	.28	.19	.22	
10114		12.64	.74	.39	2 2 2	.36	.18	.19	
10115		13.20	.72	.48	2 2 2	.37	.06	.25	
10116		11.79	1.88	1.51	2 2 2	.33	.18	.10	
10117		11.89	.62	.25	2 2 2	.32	.19	.17	
10118		12.19	1.71	1.37	2 2 2	.39	.21	.12	
10119		12.96	.69	.07	2 2 1	.29	.29	--	
10120		12.79	.57	.06	2 2 1	.32	.11	--	
10121		13.23	.98	.78	2 1 2	.29	--	.16	
10122		12.89	2.31	--	2 1 0	.44	--	--	
10123		12.78	2.54	--	2 1 0	.32	--	--	
10124		12.92	.61	.64	2 1 2	.37	--	.13	
10125		12.64	1.87	--	3 1 0	.29	--	--	
10126		12.12	1.55	1.57	2 1 2	.31	--	.25	
10127		12.29	1.36	1.82	2 1 2	.35	--	.15	
10128		12.69	1.32	1.25	2 1 2	.38	--	.09	
10129		12.26	1.30	1.30	2 1 2	.39	--	.35	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
10130		12.62	1.46	1.42	2 1 1	.33	--	--	
10131		12.08	2.47	--	2 1 0	.24	--	--	
10132		11.82	2.22	--	2 1 0	.42	--	--	
10401		12.64	.15	.67	1 1 1	--	--	--	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
11001	A0V	9.92	.17	.08	2 2 2	.14	.01	.09	
11002	K1III	9.70	1.07	.72	2 2 2	.05	.03	.02	
11003	K1IV	9.77	1.05	.96	2 2 2	.07	.08	.02	(III ?)
11004	B9V	8.19	.02	-.17	2 2 2	.00	.08	.05	double pg
11005	B9V	8.35	.02	-.45	2 2 2	.10	.06	.01	
11006	A1V	10.65	.14	.33	2 2 2	.03	.13	.11	
11007	08I	8.86	.75	-.15	2 2 2	.02	.11	.07	
11008	A3V	10.30	.37	.31	2 2 2	.02	.03	.08	Am ?
11009	A6V	10.60	.28	.16	2 2 2	.03	.00	.11	
11010	M6III	10.21	2.02	1.29	2 2 2	.09	.06	.02	double pg
11011	K1III:	8.93	1.21	1.15	2 2 2	.12	.02	.12	
11012	A0V	9.33	-.04	-.10	2 2 2	.11	.01	.09	
11013	A2V	10.73	.17	.19	2 2 2	.10	.01	.12	
11014	F	9.45	.41	.24	2 2 2	.09	.04	.07	ovlp
11015	G	9.27	1.14	1.21	2 2 3	.02	.02	.02	ovlp
11016	F2V	10.89	.45	.07	2 2 2	.08	.12	.05	
11017	A4V	11.76	.34	.10	2 2 2	.07	.12	.03	
11018	F3IV	10.99	.51	.09	2 2 2	.09	.09	.00	double pg
11019	B2	10.72	.55	-.33	2 2 2	.11	.09	.11	ovlp
11020	B	11.28	.59	.03	2 2 2	.08	.04	.06	ovlp
11021	A0V:	10.33	-.57	.38	2 2 2	.00	.18	.23	ovlp
11022	A0V	11.77	.63	.23	2 2 2	.15	.03	.00	
11023	F8III	11.21	.47	.10	2 2 2	.09	.04	.10	pec ?
11024	A0V	11.74	.33	.07	2 2 2	.10	.02	.10	
11025	G3V	11.16	.72	.10	2 2 2	.12	.05	.05	
11026	F6IV	11.34	.58	.08	2 2 2	.16	.03	.02	
11027	F3V	11.14	.53	-.12	2 2 2	.12	.01	.09	Ap? str UV
11028	G0V	12.08	.72	.06	2 2 2	.05	.03	.01	
11029	F4:	13.12	.74	.00	2 2 2	.09	.07	.08	pec ?
11030	G2	12.12	.62	-.20	2 2 2	.09	.06	.04	
11031	G5:	12.38	.78	-.02	2 2 2	.15	.03	.09	
11032	B1I:	12.28	.59	-.25	2 2 2	.09	.09	.10	
11033	G2III	11.69	.67	.14	2 2 2	.15	.06	.05	
11034	F8:	12.41	.60	.02	2 2 2	.13	.00	.03	ovlp
11035	G8:	11.72	.80	.13	2 2 2	.06	.01	.05	ovlp
11036	G0:	12.57	.57	-.07	2 2 2	.05	.01	.06	
11037	F0V	12.40	.55	-.12	2 2 2	.13	.02	.05	
11038	K	12.10	1.19	.83	2 2 2	.09	.04	.08	
11039	G2:	12.36	.70	-.05	2 2 2	.10	.02	.10	double ?
11040	G0:	11.83	.65	-.13	2 2 2	.11	.01	.03	
11041	A4V	12.30	.46	.09	2 2 2	.07	.08	.01	ovlp
11042	G	12.33	.72	-.03	2 2 2	.12	.00	.09	ovlp
11043	07	11.70	.72	-.41	2 2 2	.06	.02	.02	e He4200
11044	A4V	11.44	.47	-.07	2 2 2	.06	.04	.04	ovlp
11045	M5III	10.54	2.22	2.25	2 2 2	.03	.05	.08	double pg
11046	F0V	11.94	.36	-.01	2 2 2	.07	.01	.02	
11047	G8III:	11.62	.92	.58	2 2 2	.03	.00	.03	
11048	F8V	11.78	.47	-.01	2 2 2	.01	.05	.14	
11049	A0V	13.02	.63	.38	2 2 2	.10	.10	.04	ApSi4200
11050	F3V	12.59	.43	-.07	2 2 2	.03	.06	.03	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
11051	G:	12.90	.63	-.18	2 2 2	.07	.11	.13	uxp
11052	B	13.04	.73	.25	2 2 2	.14	.09	.03	uxp
11053	K4III:	12.70	.71	.01	2 2 2	.10	.03	.04	uxp
11054	G5	11.75	.71	.17	2 2 2	.05	.08	.04	
11055	G5:	13.01	.67	-.01	2 2 2	.06	.01	.06	uxp
11056	K:	12.45	.93	.26	2 3 2	.14	.03	.02	uxp
11057	G	10.72	1.16	.91	2 2 2	.04	.02	.12	ovlp
11058	G5	11.84	.64	.26	2 2 2	.11	.05	.07	
11059	F0IV:	12.24	.62	-.16	2 2 2	.11	.03	.01	
11060	G5	12.03	.65	.00	2 2 2	.01	.02	.04	
11061	A1V	12.12	.48	.39	2 2 2	.07	.04	.08	
11062	B8V	11.66	.77	-.22	2 2 2	.18	.06	.13	
11063	A0V	12.23	.62	.46	2 2 2	.05	.04	.07	
11064	G0V	11.80	.51	.07	2 2 2	.08	.03	.02	
11065	K0:	11.43	.68	.18	2 2 2	.09	.01	.05	diffuse
11066	G8V:	11.60	.95	.62	2 2 2	.13	.01	.04	
11067	M1:	12.75	.60	.09	2 2 2	.12	.04	.00	pec?
11068	K5V:	12.81	.80	.09	2 2 2	.06	.00	.06	
11069	F:	12.33	1.09	-.16	2 2 2	.09	.06	.00	uxp
11070	K0:	12.98	.70	.09	2 2 2	.17	.00	.04	
11071	F5	12.83	.53	-.13	2 2 2	.03	.00	.03	
11072	G	12.91	.64	-.05	2 2 2	.12	.05	.06	uxp
11073	F5III	12.42	.45	-.02	2 2 2	.01	.07	.01	
11074	F3V	12.07	.42	.09	2 2 2	.02	.10	.07	
11075	F3V	13.02	.81	.06	2 2 2	.18	.03	.02	
11076	F	12.48	.41	.01	2 2 2	.06	.05	.01	ovlp
11077	G2:	13.12	.74	-.08	2 2 2	.15	.07	.04	
11078	G5III	11.93	.66	.03	2 2 2	.13	.02	.05	
11079	F0V	12.50	.44	-.11	2 2 2	.09	.05	.01	
11080	F0V	12.08	.53	-.11	2 2 2	.08	.05	.09	
11101		13.09	.75	-.03	2 2 2	.09	.04	.10	
11102		12.63	1.01	.60	2 2 2	.04	.07	.03	
11103		13.14	.78	.36	2 2 2	.11	.01	.02	
11104		13.26	.66	-.03	2 2 2	.08	.06	.01	
11105		13.22	.80	.15	2 2 2	.10	.02	.04	
11106		12.94	.67	.15	2 2 2	.06	.13	.09	
11107		12.18	.57	.17	2 2 2	.07	.03	.07	
11108		12.73	.72	.07	2 2 2	.03	.05	.10	
11109		12.05	.69	-.17	2 2 2	.20	.03	.00	
11110		13.18	.84	.23	2 2 2	.14	.01	.04	
11111		13.02	.63	-.04	2 2 2	.19	.01	.09	
11112		13.15	.64	-.19	2 2 2	.20	.01	.03	
11113		13.42	.58	-.12	2 2 2	.05	.09	.08	
11114		--	--	--	2 0 0	.16	--	--	
11115		12.50	2.73	--	2 1 0	.01	--	--	
11116		12.98	2.03	--	2 1 0	.02	--	--	
11117		12.22	2.22	1.05	2 1 1	.05	--	--	
11118		12.79	.96	.29	2 1 2	.07	--	.06	
11119		13.08	.61	-.22	2 1 1	.19	--	--	
11501		--	--	--	1 0 0	--	--	--	
11701		11.37	.62	-.08	2 2 2	.08	.01	.04	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
12001	B2V	8.77	.45	-.55	2 2 2	.12	.03	.01	broadlined
12002	F1V	8.37	.42	.11	2 2 2	.16	.02	.07	
12003	B9V	10.23	-.09	-.23	2 2 2	.05	.01	.04	
12004	K1III	8.67	1.20	1.39	2 2 2	.10	.06	.29	double
12005	A2V	10.34	.11	.14	2 2 2	.08	.05	.07	
12006	F8V	10.37	.52	.06	2 2 2	.09	.02	.10	
12007	A8IV	10.28	.39	.06	2 2 2	.19	.01	.19	Ap
12008	B1V	8.40	.77	-.39	2 2 2	.11	.06	.07	
12009	A1V	9.71	.17	.00	2 2 2	.08	.07	.11	
12010	A1V	10.61	.30	.19	2 2 2	.09	.03	.11	
12011	B4V	9.21	.21	-.50	2 2 2	.10	.10	.08	
12012	F2V	10.23	[illegible]	.17	2 2 2	.09	.02	.04	
12013	A0V	10.18	.07	.04	2 2 2	.06	.01	.11	
12015	F8IV	11.14	.67	-.08	2 2 2	.17	.07	.11	
12016	B9V	10.94	.77	.40	2 2 2	.15	.05	.16	
12017	A0V	11.56	.62	.29	2 2 2	.18	.05	.00	
12018	B9V	10.69	.46	.15	2 2 3	.20	.02	.12	double pg
12019	G3IV	10.04	.72	.21	2 2 2	.11	.02	.13	
12020	F0V	11.36	.49	.01	2 2 2	.12	.17	.09	
12021	G0V	10.86	.61	.07	3 2 2	.06	.06	.01	
12022	G0V	11.52	.54	.05	2 2 2	.06	.02	.01	
12023	G2	13.26	.66	-.11	2 2 2	.07	.02	.21	
12024	G8III	12.67	.84	.18	2 2 2	.10	.04	.12	
12025	K0	12.91	.86	.38	2 2 2	.06	.01	.07	
12026	K0V	12.23	.80	.28	2 2 2	.11	.05	.16	
12027	F1III	12.07	.44	-.06	2 2 2	.15	.01	.05	
12028	G5	12.39	.68	.10	2 2 2	.10	.04	.04	
12029	A8V	11.86	.56	-.03	2 2 2	.05	.01	.02	
12030	G1	12.48	.80	-.12	2 2 2	.14	.09	.02	confused
12031	F0V	10.80	1.47	1.00	2 2 2	.13	.04	.01	
12032	G8	12.47	.74	-.17	2 2 2	.11	.10	.08	ovlp
12033	G0	12.48	.70	-.06	2 2 2	.21	.05	.04	ovlp
12034	K3V	12.81	1.08	.70	2 2 2	.13	.05	.00	
12035	A1IV	12.73	.86	.19	2 2 2	.15	.03	.06	
12036		12.98	.75	-.03	2 2 2	.15	.07	.06	too faint
12037		13.02	.76	.04	2 2 2	.07	.01	.06	too faint
12038	G8	12.64	.73	-.02	2 2 2	.23	.05	.12	uxp
12039	F8	13.17	.66	-.14	2 2 2	.14	.01	.06	uxp
12040	G8	12.57	.67	-.04	2 2 2	.13	.00	.01	uxp
12041	K0V	10.97	.98	.90	2 2 2	.13	.00	.09	
12042	G5V	11.50	.78	.31	2 2 2	.12	.07	.05	
12043	K0III	12.02	.92	.48	2 2 2	.06	.03	.00	
12044	G0V	11.62	.53	-.12	2 2 2	.05	.02	.02	
12045	F5IV	11.69	.50	-.02	2 2 2	.01	.01	.06	Fe rich ?
12046	A0V	11.81	.89	.29	2 2 2	.05	.01	.04	ApSr?
12047	G	12.80	.51	-.16	2 2 2	.06	.10	.11	uxp
12048	G8	12.44	.66	.04	2 2 2	.05	.05	.00	ovlp
12049	G	12.56	.63	-.04	2 2 2	.05	.10	.03	ovlp
12050	G	11.63	1.61	1.25	2 2 2	.03	.03	.12	ovlp
12051	B4V	11.77	.72	.07	2 2 2	.04	.09	.02	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
12052	B7III	11.39	.82	.14	2 2 2	.08	.03	.03	double ?
12053	G2	11.99	.60	-.01	2 2 2	.10	.03	.02	ovlp
12054	K	12.62	.69	.05	2 2 2	.06	.06	.09	ovlp
12055	B9V	11.73	.81	.38	2 2 2	.12	.07	.09	
12056	G4V	11.87	.62	-.11	2 2 2	.09	.04	.11	
12057	B8V	11.79	.98	.28	2 2 2	.10	.01	.07	
12058	G0V	12.27	.69	-.02	2 2 2	.17	.00	.02	
12059	A5V	11.82	.60	.10	2 2 2	.10	.00	.04	
12060	B9V	12.30	.85	.49	2 2 2	.09	.02	.04	
12061	A0V	11.54	.86	.29	2 2 2	.16	.00	.04	
12062	F5	12.41	.57	-.15	2 2 2	.12	.01	.14	
12063	A2	12.48	1.01	.54	2 2 2	.12	.04	.00	
12064	G8	11.91	.79	-.06	2 2 2	.15	.01	.09	
12065	F5	12.47	.60	-.09	2 2 2	.08	.10	.08	
12066	F0	11.93	.55	-.15	2 2 2	.15	.07	.05	
12067	A4V	11.90	.33	.04	2 2 2	.20	.01	.06	
12068	F0V	11.85	.57	-.16	2 2 2	.20	.03	.02	
12069	K	10.92	1.94	1.89	2 2 2	.21	.10	.02	
12070	F0V	12.39	.48	-.06	2 2 2	.18	.02	.01	
12071	A	12.40	.84	.14	2 2 2	.17	.06	.11	ovlp
12072	B	12.38	.98	.25	2 2 2	.15	.06	.05	ovlp
12101		13.40	.72	-.19	2 2 2	.25	.06	.08	
12102		13.62	.68	-.02	2 2 2	.04	.04	.10	
12103		13.15	.65	-.16	2 2 2	.02	.08	.03	
12104		13.23	.87	.28	2 2 2	.16	.02	.16	
12105		13.22	.69	-.10	2 2 2	.17	.03	.04	
12106		12.74	.74	.14	2 2 2	.11	.14	.04	
12107		13.14	.76	-.02	2 2 2	.05	.14	.08	
12108		12.24	1.48	.89	2 2 2	.04	.03	.03	
12109	A7V	12.77	.72	.18	2 2 2	.07	.05	.17	
12110		13.20	.91	.07	2 2 2	.05	.12	.12	
12111		12.75	.56	-.07	2 2 2	.18	.01	.00	
12112		12.82	.76	-.14	2 2 2	.06	.01	.00	
12113		12.85	.77	.12	2 2 2	.13	.02	.00	
12114		12.69	.65	-.13	2 2 2	.15	.01	.05	
12115		12.59	.78	-.06	2 2 2	.12	.05	.05	
12116		11.30	1.25	.89	2 2 2	.10	.04	.13	
12117		13.38	.77	-.01	2 2 2	.17	.01	.11	
12118		13.25	.65	.02	2 2 2	.12	.01	.10	
12119		12.81	.75	.07	2 2 2	.10	.01	.02	
12120		12.98	.59	-.12	2 2 2	.05	.04	.00	
12121		12.20	.69	.10	2 2 2	.05	.02	.03	
12122		12.32	.61	-.03	2 2 2	.09	.13	.01	double pg
12123		13.55	.65	.32	2 2 2	.06	.07	.03	
12124		12.94	.74	.20	2 2 2	.01	.04	.01	
12125		13.42	.65	-.04	2 2 2	.06	.03	.02	
12126		12.38	2.41	--	2 1 0	.11	--	--	
12127		12.26	1.87	1.38	2 1 2	.16	--	.07	
12501		--	--	--	1 0 0	--			

Section D4 - 13000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
13001	A1V	10.08	.14	.13	2 2 2	.00	.04	.04	Ap
13002	K1IV	9.47	1.17	1.09	2 2 2	.07	.06	.01	
13003	K0III	3.75	1.20	1.22	0 0 0	--	--	--	ovxp
13004	B9V	8.84	-.17	-.28	2 2 2	.03	.00	.01	
13005	A2V	10.16	.28	.33	2 2 2	.01	.08	.14	
13006	A2V	--	--	--	0 0 0	--	--	--	ovxp
13007	A1V	9.54	.16	.03	2 2 2	.15	.04	.06	
13008	A2V	10.22	.23	.04	2 2 2	.09	.12	.04	
13009	A1V	10.14	.30	.24	2 2 2	.09	.06	.11	
13010	B9III	11.03	.73	.09	2 2 2	.13	.12	.00	
13011	A2IV	10.85	.28	.12	2 2 2	.09	.04	.00	
13012	A0V	11.33	.09	.15	2 2 2	.12	.08	.05	ApSi4200
13013	G2V	10.94	.64	.14	2 2 2	.08	.12	.02	
13014	A0V	11.14	.16	.12	2 2 2	.08	.04	.15	Ap/double
13015	A0V	10.56	.07	.14	2 2 2	.09	.01	.04	
13016	A3V	10.85	.26	.17	2 2 2	.16	.07	.14	
13017	F9V	10.92	.58	.10	2 2 2	.14	.07	.06	
13018	A0V	9.49	.01	.16	2 2 2	.06	.06	.06	ovlp
13019	A0V	9.42	.22	.01	2 2 2	.15	.03	.05	
13020	G1V	11.44	.57	.04	2 2 2	.05	.05	.01	
13021	A9IV:	11.31	.44	-.06	2 2 2	.10	.06	.06	
13022	A6V	11.13	.31	.08	2 2 2	.10	.06	.16	
13023	K0	11.37	.88	.35	2 2 2	.12	.13	.03	
13024	A3V	11.21	.27	.12	2 2 2	.16	.07	.07	
13025	K2V	10.34	1.00	.84	2 2 2	.10	.00	.09	
13026	A1V	12.27	.39	.25	2 2 2	.10	.02	.06	
13027	G2	10.45	.61	.04	2 2 2	.08	.08	.04	ovlp
13028	G2	10.44	.52	.19	2 2 2	.14	.12	.06	ovlp
13029	A7V	11.83	.47	.04	2 2 2	.05	.11	.03	double?
13030	A6III:	11.67	.49	-.06	2 2 2	.03	.05	.18	
13031	B	12.63	.81	.33	1 2 2	--	.08	.04	uxp
13032	A2V	12.65	.49	.13	2 2 2	.03	.01	.01	
13033	F	11.81	.47	.03	2 2 2	.06	.01	.07	ovlp
13034	A7V	12.31	.52	-.05	2 2 2	.00	.01	.01	ApSr
13035	G0III	11.21	.59	.09	1 2 2	--	.08	.02	
13036	A0V	12.40	.50	.26	2 1 2	.14	--	.07	
13037	B4:	13.00	.65	.36	2 2 2	.14	.04	.07	uxp
13038	B	13.44	.82	.38	2 2 2	.11	.02	.01	uxp
13039	G6:	12.08	.72	.14	2 2 2	.09	.11	.07	
13040	A1V	12.27	.40	.19	2 2 2	.05	.03	.07	
13041	A0IV	11.83	.04	.17	2 2 2	.10	.09	.01	
13042	F8V	11.56	.55	.06	2 2 2	.10	.01	.05	
13043	F8	12.47	.51	-.10	2 2 2	.15	.01	.07	
13044	A6V	12.12	.40	.09	2 2 2	.10	.08	.02	
13045	F	12.73	.46	-.13	2 2 2	.07	.07	.02	uxp
13046	F5V	12.25	.47	.01	2 3 2	.10	.04	.02	
13047	G0V	11.50	.54	.07	2 2 2	.15	.11	.11	
13048	A5V	11.53	.40	.08	2 2 2	.24	.10	.04	
13049	F5V:	11.40	.58	.00	2 2 2	.19	.15	.14	
13050	K3V	12.10	1.02	.70	2 2 2	.20	.13	.02	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
13051	A8IV	12.14	.38	.11	2 2 2	.12	.12	.01	ApSr??
13101		12.63	.63	.01	2 2 2	.00	.00	.08	
13102		13.25	.87	-.06	2 2 2	.15	.04	.07	
13103		12.50	.60	-.04	2 2 2	.05	.06	.04	
13104		12.67	1.12	.81	1 2 2	--	.08	.03	
13105		12.87	.78	.03	2 2 2	.04	.01	.00	
13106		13.12	.92	.09	2 2 2	.16	.12	.10	
13107		13.23	.83	.06	2 2 2	.13	.02	.05	
13108		12.73	.73	.11	2 2 2	.07	.19	.01	
13109		13.00	.45	-.05	2 2 2	.12	.06	.05	
13110		12.66	.96	.21	2 2 2	.21	.03	.06	
13111		13.28	.67	.21	2 2 2	.27	.09	.04	
13112		13.05	.68	.06	2 2 2	.09	.01	.03	
13113		11.76	1.97	1.89	2 1 2	.13	--	.03	
13114		--	--	--	2 0 0	.16	--	--	

Section D5 - 14000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
14001	A0V	9.81	.11	.18	2 2 2	.13	.04	.12	
14002	A2V	10.39	.15	.20	2 2 2	.10	.04	.11	
14003	F0IV	10.18	.44	.01	2 2 2	.14	.01	.09	pec
14004	A7V	10.77	.45	.07	2 2 2	.20	.14	.23	Ap(SrCrEu)
14005	B6V	10.57	.63	-.16	2 2 2	.20	.10	.17	
14006	K1III	10.15	1.14	1.22	2 2 2	.18	.07	.13	
14007	F0III	9.76	.43	.04	2 2 2	.18	.03	.12	
14008	B9V	9.24	-.03	-.04	2 2 2	.14	.02	.11	
14009	K0III	9.36	1.11	1.03	2 2 2	.13	.03	.17	
14010	A1V	9.93	.07	.23	2 2 2	.16	.04	.21	
14011	A0V	10.43	.05	.52	2 2 2	.19	.06	.23	ApSi
14012	F1V	9.50	1.14	.85	2 2 2	.20	.06	.25	Am ?
14013	K0III	9.59	.96	.71	2 2 2	.27	.03	.09	
14014	F8IV	9.88	.58	.18	2 2 2	.25	.06	.19	
14015	K0III	9.64	1.36	1.58	2 2 2	.30	.13	.22	
14016	A0V	11.35	.59	.42	2 2 2	.36	.13	.17	
14017	G9V	8.79	1.24	1.09	2 2 2	.25	.09	.21	
14018	F6IV	9.86	.56	.31	2 2 2	.29	.08	.23	
14019	F7IV:	10.34	.53	.16	2 2 2	.30	.10	.15	
14020	B8V	8.87	-.09	-.45	2 2 2	.21	.01	.05	
14021	A5V	10.04	.27	.32	2 2 2	.26	.08	.15	
14022	G8III	9.96	.81	.64	2 2 2	.36	.06	.12	ovlp
14023	K5III	10.65	1.15	1.36	2 2 2	.16	.13	.02	
14024	F3IV	11.10	.45	.13	2 2 2	.13	.05	.15	
14025	F8V	11.12	.58	.02	3 3 2	.21	.04	.11	
14026	B9V	11.85	.38	.21	2 2 2	.29	.11	.19	pec MnHg?
14027	F5	10.52	.48	.10	2 2 2	.19	.07	.22	ovlp
14028	B9V	11.71	.56	.44	2 2 2	.23	.04	.18	double pg
14029	A7V	11.72	.36	.20	2 2 2	.36	.10	.16	
14031	F2V	11.38	.50	.14	2 2 2	.40	.13	.15	
14032	F2V	11.09	.60	.08	2 3 2	.37	.13	.22	
14033	F2V	10.61	.58	.18	2 2 2	.30	.07	.22	lum ?
14034	F5	12.69	.57	-.08	2 2 2	.16	.06	.03	
14035	A9III	11.90	.49	.07	2 2 2	.21	.04	.09	
14036	G2V	12.46	.47	.03	2 2 2	.20	.05	.18	ovlp
14037	F0V	12.36	.63	.24	2 2 2	.14	.03	.13	
14038	K0:	10.77	.86	.57	2 2 2	.11	.03	.02	
14039	G1V	12.24	.52	.13	2 2 2	.20	.04	.09	double ?
14040	G5III	12.23	.70	.34	2 2 2	.26	.12	.09	
14041	F5V:	12.44	.59	-.05	2 2 2	.20	.01	.09	
14042	O9:	11.40	1.06	-.01	2 2 2	.22	.08	.12	
14043	F0III:	11.97	.61	-.02	2 2 2	.19	.02	.24	double
14044	K4V:	12.46	1.13	.96	2 2 2	.18	.15	.09	uxp
14045	K5III	11.43	1.67	1.46	2 2 2	.25	.12	.01	
14046	O9V	11.12	1.22	.23	2 2 2	.27	.47	.13	
14047	F2V	11.96	.63	.08	2 2 2	.35	.10	.14	ovlp
14048	A1V	12.59	1.03	.87	2 2 2	.36	.09	.25	
14049	A:	12.87	1.14	.62	2 2 2	.39	.03	.22	uxp
14050	G5V	12.04	.80	.21	2 2 2	.29	.13	.17	
14051	G2:	12.49	.60	.09	2 2 2	.38	.05	.14	pec (Ba ?)

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
14052	F0V	11.87	.41	.22	2 2 2	.28	.11	.13	
14053	A7III:	11.98	.48	.06	2 2 2	.27	.07	.18	ovlp
14054	K2V	11.50	1.12	1.06	2 2 2	.29	.14	.14	
14055	F3III:	12.13	.57	.06	2 2 2	.30	.12	.21	
14056	F2:	12.03	.65	.17	2 2 2	.24	.06	.15	ovlp
14057	G2III	11.80	.75	.08	2 2 2	.28	.06	.20	
14058	G0III	11.87	.63	.19	2 2 2	.14	.08	.21	
14059	G5:	12.28	.80	.25	2 2 2	.26	.07	.09	
14060	G0:	12.78	.65	.06	2 2 2	.17	.08	.11	
14061	B	12.59	.92	.44	2 2 2	.23	.06	.08	
14062	F5:	12.83	.54	.03	2 2 2	.31	.02	.12	uxp
14063	F8:	11.80	.60	.16	2 2 2	.19	.11	.13	ovlp
14064	K4	11.40	1.71	1.65	2 2 2	.21	.13	.06	
14065	F0V	11.16	.67	.10	2 2 2	.23	.08	.10	
14066	F0V	11.90	.64	.32	2 2 2	.22	.09	.17	ovlp
14067	F0V	12.01	.45	.24	2 2 2	.39	.16	.10	
14068	G0V	11.56	.58	.17	2 2 2	.42	.16	.12	
14069	G3V:	11.22	.83	.30	2 2 3	.35	.13	.11	str G band
14070	A	12.37	.62	.33	2 2 2	.44	.13	.12	ovlp
14071	F3:	12.62	.64	.21	2 2 2	.34	.17	.00	emission?
14072	A5V	11.92	.54	.34	2 2 2	.30	.17	.11	
14073	F:	12.35	.65	.27	2 2 2	.49	.10	.04	ovlp
14074	B	12.20	.87	.28	2 2 2	.31	.06	.13	ovlp
14075	G0	12.21	.82	.26	2 2 2	.35	.11	.07	
14076	A1V	12.53	.75	.54	2 2 2	.38	.11	.18	
14077	F7V	11.84	.68	.15	2 2 2	.30	.07	.12	
14078	G5	11.20	.82	.40	2 2 2	.34	.05	.11	
14079	A0V	11.30	.72	.59	2 2 2	.39	.13	.19	
14080	G8:	11.39	.81	.37	2 2 2	.42	.10	.14	ovlp
14081	K0:	11.56	1.29	.96	2 2 3	.38	.04	.12	
14082	A2V	12.11	.94	.49	2 2 2	.54	.13	.24	
14083	A	12.51	1.17	.44	2 2 2	.40	.16	.16	uxp
14084	G8	12.10	.76	.17	2 2 2	.41	.08	.15	ovlp
14085	A2V	13.09	.65	.40	2 2 2	.36	.12	.05	
14086	G8	12.46	1.00	.67	2 2 2	.35	.20	.12	
14087	F5	12.52	.77	.04	2 2 2	.30	.24	.15	
14101		12.61	.48	-.01	2 2 2	.10	.08	.00	
14102		13.19	.78	.07	2 2 2	.12	.04	.12	
14103		12.78	.63	.15	2 2 2	.21	.00	.02	
14104		13.14	.72	.22	2 2 2	.23	.00	.12	
14105		13.04	1.04	.77	2 2 2	.21	.00	.02	
14106		12.87	.78	.13	2 2 2	.19	.09	.11	
14107		13.15	.75	.23	2 2 2	.17	.04	.05	
14108		13.22	.84	.12	2 2 2	.32	.08	.16	
14109		12.90	.76	.02	2 2 2	.14	.07	.06	
14110		13.11	.84	.10	2 2 2	.22	.01	.10	
14111		12.90	.83	.36	2 2 2	.26	.05	.11	
14112		12.66	.74	.13	2 2 2	.31	.03	.16	
14113		12.27	.69	.28	2 2 2	.15	.02	.01	
14114		13.02	.82	.21	2 2 2	.09	.05	.00	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
14115		13.39	.68	-.05	2 2 2	.22	.10	.04	
14116		12.45	.85	.43	2 2 2	.25	.09	.09	
14117		12.61	.62	-.05	2 2 2	.26	.03	.04	
14118		13.06	.63	-.12	2 2 2	.28	.04	.17	
14119		12.59	.88	.33	2 2 2	.27	.06	.01	
14120		13.10	.89	.22	2 2 2	.31	.04	.09	
14121		12.74	.73	.12	2 2 2	.39	.03	.19	
14122		12.85	.66	.02	2 2 2	.38	.09	.09	
14123		13.17	.81	-.01	2 2 2	.31	.08	.11	
14124		12.72	.86	.10	2 2 2	.28	.09	.13	
14125		13.01	.57	.16	2 2 2	.30	.15	.14	
14126		12.91	.72	-.05	2 2 2	.29	.11	.29	
14127		12.85	.78	.15	2 2 2	.28	.03	.02	
14128		12.76	.99	.49	2 2 2	.22	.05	.15	
14129		12.82	.65	.32	2 2 2	.44	.07	.14	
14130		12.98	.73	.09	2 2 2	.42	.12	.06	
14131		13.01	.95	.22	2 2 2	.38	.08	.21	
14132		13.13	.69	.25	2 2 2	.40	.10	.18	
14133		12.99	.71	.13	2 2 2	.41	.13	.21	
14134		12.66	1.07	--	2 1 0	.41	--	--	
14135		12.30	1.65	1.63	2 1 2	.45	--	.16	
14136		13.03	1.75	--	2 1 0	.47	--	--	
14401		--	--	--	1 0 0	--	--	--	

Section D6 - 15000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
15001	A4V	8.26	.17	.26	2 2 2	.30	.02	.14	
15002	A0V	10.64	.06	.33	2 2 2	.37	.10	.22	
15003	A1V	10.08	.01	.23	2 2 2	.39	.14	.40	
15004	G0III	11.09	.48	.31	2 2 2	.39	.19	.27	
15005	K3III	9.02	1.30	1.83	2 2 2	.33	.19	.26	
15006	A2V	10.80	.15	.45	2 2 2	.34	.18	.26	
15007	B4V	5.79	-0.21	-0.84	0 0 0	--	--	--	ovxp
15008	A1V	10.26	-.08	.34	2 2 2	.33	.08	.25	
15009	A1V	11.02	.13	.41	2 2 2	.36	.16	.28	ApSi42000
15010	B9V	9.66	-.26	-.11	2 2 2	.37	.06	.26	
15011	A7V	10.33	.08	.33	2 2 2	.32	.10	.37	
15012	A4V	10.98	.05	.56	2 2 2	.37	.23	.36	
15013	A4V	11.19	.02	.36	2 2 2	.34	.15	.45	
15014	G2V	10.08	.42	.22	2 2 2	.36	.16	.35	
15015	A6V	11.04	.24	.45	2 2 2	.38	.19	.34	
15016	G0	10.63	.49	.33	2 2 2	.44	.19	.34	ovlp
15017	K1V	9.93	.66	.48	2 2 2	.37	.16	.23	
15018	F0III	11.40	.41	.17	2 2 2	.37	.13	.22	
15019	A0V	11.71	.11	.43	2 2 2	.37	.10	.20	
15020	G3:	11.26	.44	.31	2 2 2	.43	.11	.34	
15021	A8III	12.07	.29	.23	2 2 2	.41	.23	.30	
15022	F0	12.01	.44	.18	2 2 2	.41	.24	.26	pec?/ovlp
15023	F5V:	11.74	.53	.20	2 2 2	.39	.24	.07	ovlp
15024	B9IV	12.19	.50	.20	2 2 2	.40	.14	.24	
15025	A1V	13.18	.66	.67	2 2 2	.42	.18	.20	
15026	K0	11.44	1.55	1.37	2 2 2	.37	.23	.04	
15027	A3V	12.17	.53	.55	2 2 2	.40	.22	.28	ovlp
15028	A0V	12.65	.49	.45	2 2 2	.39	.19	.26	
15029	M2I:	12.57	1.37	1.30	2 2 2	.47	.22	.20	uxp/ovlp
15030	A0V	13.08	.43	.45	2 2 2	.46	.25	.10	
15031	B	13.40	.02	.50	1 2 2	--	.02	.29	uxp
15032	F0V	12.73	.45	.17	2 2 2	.44	.16	.24	
15033	F0V	12.97	.39	.14	2 2 2	.49	.24	.21	ovlp (Cal)
15034	A3:	12.79	.42	.01	2 2 2	.53	.05	.34	ovlp
15035	B8V	11.41	.66	.33	2 2 2	.37	.22	.21	
15036	K0V	12.51	.77	.72	2 2 2	.42	.22	.15	
15037	G2	12.46	.70	.32	2 2 2	.40	.27	.16	
15038	G1	11.61	.54	.34	2 2 2	.36	.15	.20	
15039	G	11.51	.62	.54	2 2 2	.38	.16	.23	ovlp
15040	F0V	11.04	.20	.20	2 2 2	.37	.10	.20	
15041	G	12.69	.50	.26	2 2 2	.36	.24	.16	ovlp
15042	G	12.64	.23	.30	2 2 2	.41	.14	.31	ovpl
15043	F5III	11.95	.39	.28	2 2 2	.39	.17	.16	
15044	A	13.09	.75	.77	2 2 2	.35	.16	.12	Ap (FeI ?)
15045	G0	12.50	.58	.22	2 2 2	.39	.23	.19	ovlp
15046	F6	12.61	.47	.14	3 2 2	.30	.19	.20	
15047	G2:	11.94	.58	.25	2 2 2	.44	.12	.36	
15048	B9V	12.49	.47	.62	2 2 2	.49	.21	.33	
15049	A2:	12.62	.36	.64	2 2 2	.39	.19	.29	ovlp
15050	G0III:	11.52	1.04	1.47	2 2 2	.43	.20	.31	

Section D6 - 15000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
15051	G6:	11.99	1.09	1.15	2 2 2	.46	.17	.39	uxp
15052	K	11.61	.63	.80	2 2 2	.44	.16	.46	ovlp
15053	G	12.30	.37	.34	2 2 2	.49	.21	.42	ovlp
15054	M5:	11.76	1.85	--	2 2 0	.44	.18	--	uxp
15055	A	12.94	.44	.72	2 2 2	.44	.17	.40	ovlp
15056	F	12.27	.64	.54	2 2 2	.47	.07	.50	emission
15057	A	13.52	.58	.70	2 2 2	.39	.23	.37	too faint
15058	G	12.81	.52	.34	2 2 2	.42	.22	.25	uxp
15059	G:	12.81	.41	.27	2 2 2	.43	.15	.35	confused
15060	F2III:	12.39	.84	.78	2 2 2	.50	.24	.25	
15061	G0	12.73	.44	.15	2 2 2	.49	.20	.29	uxp
15062	K4V	12.42	1.73	--	2 2 0	.40	.16	--	
15063	G8	11.94	.71	.97	2 2 2	.41	.19	.22	
15064	K3V	12.63	.83	.95	2 2 2	.42	.11	.23	
15065	F0V	12.46	.89	.80	2 2 2	.43	.24	.30	
15066	F2III:	12.81	.45	.25	2 2 2	.47	.22	.20	
15067	F2V:	13.32	.36	.08	2 2 2	.42	.20	.20	
15068	F	13.09	.36	.04	2 2 1	.42	.22	--	uxp
15069	F8:	12.05	.26	.30	2 2 2	.40	.24	.35	ovlp
15070	G0:	12.67	.29	.35	2 2 2	.42	.05	.53	ovlp
15071	K	12.44	.81	1.20	2 2 2	.39	.16	.26	uxp
15072	F8III	11.98	.34	.28	2 2 2	.35	.16	.33	
15073	A1V	12.37	.38	.91	2 2 2	.36	.21	.37	
15101		12.73	.64	.09	2 2 2	.26	.19	.23	
15102		12.81	.86	.20	2 3 2	.43	.13	.26	
15103		13.17	.82	.53	2 2 2	.44	.14	.27	double pg
15104		13.12	.52	.12	2 2 2	.36	.16	.20	
15105		12.90	.78	.54	2 2 2	.36	.23	.22	
15106		12.70	.99	1.13	2 2 2	.42	.19	.33	
15107		13.10	.50	.37	2 2 2	.38	.20	.18	
15108		13.28	.53	.17	2 2 2	.46	.16	.14	
15109		13.16	.67	.39	2 2 2	.39	.26	.13	
15110		12.72	.75	.68	2 2 2	.42	.19	.11	
15111		12.90	.71	.47	2 2 2	.43	.18	.07	
15112		13.12	.68	.21	2 2 2	.44	.26	.09	
15113		13.00	.56	.43	2 2 2	.42	.20	.32	
15114		12.37	1.43	1.25	2 2 2	.44	.20	.32	
15115		13.15	.53	.56	2 2 2	.44	.20	.25	
15116		13.46	.74	.19	1 2 2	--	.15	.16	
15117		13.45	.14	.37	1 2 2	--	.27	.41	
15201		13.09	1.57	--	2 1 0	.40	--	--	
15202		13.24	1.06	1.25	2 1 1	.44	--	--	
15203		12.58	1.76	--	2 1 0	.42	--	--	
15204		13.05	.54	.29	2 1 2	.33	--	.03	
15205		12.95	.81	1.18	2 1 2	.47	--	.03	
15206		12.98	2.33	--	2 1 0	.38	--	--	

Section E2 - 16000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
16001	A2V	10.11	.10	.18	2 2 2	.05	.07	.11	
16002	A2V	10.48	.13	.24	2 2 2	.07	.05	.14	Ap
16003	B0III	10.11	.23	-.43	2 2 2	.00	.01	.18	f
16004	A0V	9.13	.06	.16	2 2 2	.05	.03	.15	
16005		8.70	.34	-.13	2 2 2	.06	.02	.19	WC
16006	B0V	8.18	.41	-.61	2 2 2	.01	.02	.16	n
16007	B3I	8.53	.41	-.59	2 2 2	.05	.07	.13	Ia str OII
16008	G0V	9.87	.57	.13	2 2 2	.03	.06	.07	
16009	A2V	10.96	.15	.31	2 2 2	.14	.05	.08	
16010	G5V	9.96	.72	.40	2 2 2	.08	.06	.09	
16011	A9III	10.39	.46	-.02	2 2 2	.02	.01	.09	
16012	B9V	9.76	-.01	.01	2 2 2	.01	.04	.07	
16013	A1V	8.82	.20	.08	2 1 2	.07	--	.13	A1mA3-A5
16014	A1V	10.53	.18	.26	2 2 2	.07	.00	.08	
16015	F1V	10.83	.42	.13	2 2 2	.07	.01	.16	
16016	B1I	8.34	.91	-.19	2 2 2	.00	.01	.03	Ia
16017	F5V:	9.50	.50	-.03	2 2 2	.01	.02	.02	
16018	F3IV	10.70	.47	.18	2 2 2	.01	.04	.02	
16019	A0V	11.61	.30	-.19	2 2 2	.03	.07	.01	double
16020	K3V	10.87	1.09	.79	2 2 2	.03	.03	.04	
16021	A5V	11.36	.43	.05	2 2 2	.02	.00	.12	ApSi
16022	A0V	10.56	.47	-.40	2 2 2	.10	.00	.05	double
16023	A5V	11.22	.31	.18	2 2 2	.00	.03	.10	
16024	F5V	11.18	.49	.11	2 2 2	.07	.06	.00	
16025	A0V	11.46	.32	.03	2 2 2	.06	.06	.06	Ap(SrEuCr)
16026	A6V	11.68	.37	.05	2 2 2	.07	.03	.04	Ap ?
16027	G8	10.74	.60	.20	2 2 2	.10	.01	.14	double
16028	F6IV	10.75	.48	.09	2 2 2	.01	.03	.01	
16029	G0V	10.94	.59	.12	2 2 2	.03	.05	.11	
16030	G5III	11.19	.62	.14	2 2 3	.01	.03	.03	
16031	B7V	10.81	.02	-.08	2 2 2	.09	.04	.05	
16032	B9V	11.31	.38	.31	2 2 2	.01	.09	.00	
16033	F8III:	11.76	.61	.06	2 2 2	.01	.04	.00	
16034	K4III	10.67	1.56	1.67	2 3 2	.03	.03	.02	
16035	G2III	11.76	.57	.01	2 2 2	.03	.05	.00	
16036	F5III	12.41	.54	-.10	2 2 2	.02	.05	.13	
16037	G0V	12.23	.64	.18	2 2 2	.04	.07	.01	
16038	F5V	12.16	.55	.12	2 2 2	.04	.04	.03	
16039	F8V	11.52	.59	.27	2 2 2	.02	.12	.05	double pq
16040	B7V	11.94	.45	-.25	2 2 2	.07	.02	.10	
16041	B2V	11.40	.44	.26	2 2 2	.03	.02	.09	Be
16042	K2V	10.36	1.34	1.12	2 3 2	.06	.03	.02	
16043	K	11.41	1.33	.99	2 2 3	.00	.07	.05	uxp
16044	G	12.91	.61	-.05	2 2 2	.00	.02	.13	v. uxp
16045	B5I	12.00	.39	-.27	2 2 2	.08	.03	.12	
16046	G8	10.73	1.32	1.21	2 2 2	.02	.05	.00	
16047	A0IV	12.44	.47	-.16	2 2 2	.07	.11	.06	ovlp
16048	B8V	11.62	.45	-.01	2 2 2	.17	.09	.07	BpSi
16049	O9:	10.63	.33	-.36	2 2 2	.01	.02	.09	ov'p
16050	F2III:	11.74	1.00	.77	2 2 2	.09	.00	.03	

Section E2 - 16000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
16051	A0V	12.38	.55	.27	2 2 2	.07	.13	.09	ApSrEu(Cr)
16052	G2III:	10.91	.46	.25	2 2 2	.08	.05	.18	
16053	B7V	11.67	.31	-.26	2 2 2	.09	.10	.09	
16054	B9V	12.27	.32	.12	2 2 2	.07	.14	.20	
16055	F5III	11.97	.44	-.08	2 2 2	.11	.08	.22	
16056	A0V	12.90	.32	.22	2 2 2	.05	.25	.11	
16057	F8:	12.94	.58	.02	2 2 2	.07	.09	.19	uxp
16058	F0V	11.34	.40	.04	2 2 2	.02	.05	.10	
16059	G0:	12.03	.52	.00	2 2 2	.10	.09	.10	ovlp
16060	F2V	11.82	.47	.07	2 2 2	.06	.03	.07	
16061	F5V	12.21	.57	-.06	2 2 2	.12	.06	.08	
16062	A2V	12.02	.42	.32	2 2 2	.02	.08	.06	
16063	B8V	12.69	.39	.08	2 2 2	.02	.01	.08	
16064		12.22	.60	.32	2 2 2	.06	.10	.12	ovlp
16065	A0V:	12.06	.24	.17	2 2 2	.04	.14	.19	ovlp
16066		12.09	.24	.03	2 2 2	.00	.11	.08	ovlp
16067	A0:	12.70	.33	-.13	2 2 2	.02	.10	.16	Ap uxp
16068	A3V	12.91	.58	.28	2 2 2	.01	.09	.03	
16069	G2	12.82	.63	.04	2 2 2	.00	.09	.01	ovlp
16070	G5	12.24	.68	.42	2 2 2	.00	.00	.01	
16071	F5V	11.98	.50	.06	2 2 2	.04	.05	.01	
16072	F	13.09	.53	-.15	2 2 2	.02	.01	.13	faint
16073		12.05	.77	.29	2 2 2	.02	.05	.03	too faint
16074	F8V	11.32	.53	.07	2 2 2	.01	.05	.02	
16075	G	12.91	.46	.02	2 2 2	.03	.00	.01	uxp
16076	G8I:	11.14	.90	.61	2 2 2	.08	.02	.01	pec'?
16077	G5	12.10	.62	.05	2 2 2	.02	.05	.05	
16078	K	12.75	.60	-.02	2 2 2	.06	.12	.01	uxp
16079	A5III	11.89	.58	.41	2 2 2	.03	.08	.08	
16080	F5V	11.80	.55	.16	2 2 2	.05	.05	.10	
16081	A0V	12.21	.49	.26	2 2 2	.00	.04	.01	
16082	G8:	12.23	.89	.34	2 2 2	.02	.07	.08	
16083	A9V	12.74	.53	.14	2 2 2	.05	.09	.07	
16084	G	12.72	.63	.03	2 2 2	.08	.08	.14	uxp
16085	A0V	12.21	.59	.40	2 2 2	.03	.13	.06	
16086	B	13.29	.61	.32	2 2 2	.02	.02	.17	uxp
16087	A0V	13.09	.51	.09	2 2 2	.13	.14	.08	
16088	O9I:	10.18	.81	-.06	2 2 2	.05	.12	.06	
16089	F0V	11.36	.46	.04	2 2 2	.04	.08	.00	
16090	A0V	11.83	.60	.46	2 2 2	.04	.04	.05	
16091		11.20	1.47	.38	2 2 2	.02	.06	.03	v.peculiar
16092	M:	11.39	1.73	.69	2 2 2	.03	.04	.09	uxp/double
16093	B9V	12.57	.63	.54	2 2 2	.03	.08	.06	
16094	F	12.16	.39	.09	2 2 2	.05	.08	.01	ovlp
16095	F5	12.81	.56	-.06	2 2 2	.05	.01	.03	
16096	B	11.62	1.08	-.04	2 2 2	.01	.04	.06	composite?
16097	G0V:	12.42	.53	.13	2 2 2	.03	.11	.10	pair ?
16098	K0III:	12.01	.69	.41	2 2 2	.12	.06	.02	pair ?
16099	A0V	13.31	.73	.38	2 2 2	.03	.01	.18	uxp
16100	A	12.51	.83	-.01	2 2 2	.00	.00	.02	uxp Ap?

Section E2 - 16000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
16101		13.44	.60	-.06	2 2 2	.03	.12	.10	
16102		12.89	.79	.21	2 2 2	.03	.03	.07	
16103	*	12.66	1.18	.02	2 2 2	.04	.03	.00	
16104		11.88	1.79	1.84	2 3 2	.03	.04	.00	
16105		12.24	1.58	1.47	2 2 2	.09	.01	.01	
16106		13.28	.52	.02	2 2 2	.03	.14	.18	
16107		13.25	.67	.08	2 2 2	.04	.06	.05	
16108		13.20	.60	.01	2 3 2	.07	.12	.08	
16109		13.43	.65	.02	2 2 2	.04	.05	.04	
16110		13.03	.65	.14	2 2 2	.06	.06	.08	
16111		13.08	.61	-.01	2 2 2	.05	.01	.09	
16112		13.32	.57	-.12	2 2 2	.04	.06	.20	
16113		13.30	.47	.02	2 2 2	.01	.10	.02	
16114		13.25	.67	.13	2 2 2	.02	.13	.01	
16115		12.46	.66	.33	2 2 2	.06	.08	.08	
16116		13.03	.66	.06	2 2 2	.06	.09	.05	
16117		13.46	.49	.11	2 2 2	.00	.18	.11	
16118		12.22	.64	.12	2 2 2	.07	.15	.19	
16119		11.79	1.30	1.05	2 2 2	.10	.07	.11	
16120		12.65	.81	.20	2 2 2	.07	.07	.07	
16121		12.61	.58	.63	2 2 2	.01	.10	.15	
16122		12.67	.95	.13	2 2 2	.01	.13	.15	
16123		12.58	.68	.04	2 2 2	.04	.03	.12	
16124		13.19	.46	-.04	2 2 2	.02	.10	.11	
16125		12.38	1.59	1.14	2 2 2	.02	.03	.04	
16126		13.23	.46	-.02	2 2 2	.05	.01	.05	
16127		12.91	.65	.32	2 2 2	.02	.03	.05	
16128		12.55	.53	-.13	2 2 2	.01	.05	.12	
16129		13.25	.40	.04	2 2 2	.06	.09	.07	
16130		12.72	.62	.03	2 2 2	.08	.07	.12	
16131		13.10	.39	-.19	2 2 2	.01	.00	.17	
16132		12.99	.69	.17	2 2 2	.02	.19	.25	
16133		13.30	.31	-.01	2 2 2	.01	.06	.04	
16134		12.40	1.05	.74	2 2 2	.01	.10	.10	
16135		13.17	.59	-.18	2 2 2	.07	.11	.05	
16136		13.05	.58	-.02	2 2 2	.08	.08	.12	
16137		13.14	.57	.31	2 2 2	.05	.06	.10	
16138		12.64	.88	-.05	2 2 2	.03	.08	.22	
16139		12.76	.47	.03	2 2 2	.09	.03	.15	
16140		13.00	.63	.15	2 2 2	.10	.12	.05	
16141		12.83	.49	-.01	2 2 2	.07	.08	.08	
16142		12.33	1.28	.96	2 2 2	.07	.07	.04	
16143		13.06	.95	.30	2 1 2	.05		.02	
16144		11.64	1.31	1.25	2 1 2	.03		.18	double py
16145		12.44	1.48	.94	2 1 2	.01		.01	
16146		12.26	1.75	1.32	2 1 2	.06		.05	
16147		13.06	.61	.24	1 1 2	--	-	.03	
16149		12.77	2.08	--	2 1 0	.02			
16150		12.63	1.77	.75	2 1 2	.01		.08	
16151		12.87	.47	.03	1 1 2			.03	

Section E2 - 16000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
16501		--	--	--	1 0 1	--	--	--	
16502		--	--	--	1 0 0	--	--	--	
16503		--	--	--	1 0 0	--	--	--	
16701		12.68	.20	.30	1 1 2	--	--	.05	double pg
16702		12.05	.44	.15	1 1 2	--	--	.04	double pg
16704		12.67	.73	.10	1 1 2	--	--	.07	
16705		13.34	.50	.36	1 1 2	--	--	.01	
16706		12.67	.53	.03	1 1 2	--	--	.08	
16707		12.89	.38	-.06	1 1 2	--	--	.04	
16710	F0V	5.18	0.25	0.19	0 0 0	--	--	--	

Section E3 17000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
17001	F8V	10.65	.47	.07	2 2 2	.01	.03	.02	
17002	F0V	10.43	.43	.10	2 2 2	.03	.01	.09	
17003	A2V	9.45	.23	.21	2 2 2	.05	.02	.06	Am
17004	K1III	9.50	.98	.07	2 2 2	.00	.00	.01	
17005	A0V	10.91	.15	.16	2 2 2	.05	.03	.11	
17006	A1V	9.04	.03	.11	2 2 2	.01	.04	.01	
17007	M6III	9.46	1.36	1.51	2 2 3	.02	.07	.05	
17008	A7V	10.84	.28	.24	2 2 2	.08	.03	.02	
17009	K0III	8.73	.93	.49	2 2 2	.02	.03	.03	
17010	M0III	9.08	1.02	2.28	2 2 2	.06	.00	.02	
17011	G8IV	9.85	.58	-.07	2 2 2	.02	.03	.13	
17012	A3V	10.63	.18	.26	2 2 2	.10	.02	.07	ApSr
17013	B9V	10.36	.26	-.08	2 2 2	.04	.10	.02	double?
17014	A0V	10.78	.06	.12	2 2 2	.06	.00	.10	
17015	A3V	11.30	.24	.20	2 2 2	.02	.03	.03	
17016	B8V	10.62	.95	.19	2 2 2	.02	.02	.00	
17017	A8V	11.28	.31	.11	2 2 2	.06	.01	.09	
17018	A9V	11.58	.34	-.04	2 2 2	.01	.01	.05	
17019	A6V	11.22	.33	.07	2 2 2	.02	.02	.03	
17020	F5V	11.50	.45	.05	2 2 2	.03	.04	.01	
17021	F5V	10.81	.47	.02	2 2 2	.08	.04	.01	
17022	K2V:	10.43	2.46	2.47	2 2 2	.05	.08	.06	ovlp
17023	G3:	12.29	.70	.09	2 2 2	.07	.01	.01	ovlp
17024	G	12.81	.70	-.16	2 2 2	.00	.01	.01	uxp
17025	B9V	11.84	.94	-.03	2 2 2	.13	.03	.03	BpSi?
17026	G6	12.54	.71	.33	2 2 2	.02	.06	.09	
17027	G2III:	12.87	.68	.17	2 2 1	.03	.10	-	double pg
17028	B9V	12.00	.47	.46	2 2 2	.09	.02	.00	ovlp
17029	K4V	12.24	1.66	1.07	2 2 2	.03	.01	.08	
17030	K0V	11.36	1.76	1.54	2 2 2	.02	.04	.25	
17031	G0:	12.87	.51	-.10	2 2 2	.00	.13	.05	
17032	G5:	13.07	.73	-.01	2 2 2	.01	.08	.07	
17033	B8	11.15	1.07	-.04	2 2 2	.04	.01	.01	double?
17034	F0V	11.40	.41	.03	2 2 2	.04	.04	.05	
17035	G	12.60	.81	.55	2 2 2	.01	.11	.06	uxp
17036	F5V	12.08	.49	.05	2 2 2	.06	.04	.02	
17037	F2:	12.37	.48	-.09	2 2 2	.03	.10	.91	pec (Fe)
17038	G8III:	12.44	.69	.25	2 2 2	.03	.00	.19	
17039	G1V:	13.24	.61	-.16	2 2 2	.07	.02	.09	uxp
17040	G5III	11.72	.61	.08	2 2 2	.03	.03	.03	
17041	G8III:	11.96	.75	.42	2 2 2	.03	.06	.02	
17042	F0I:	11.40	1.39	.18	2 2 2	.01	.02	.01	
17043	G0I	11.83	.57	.14	2 2 2	.01	.02	.00	ovlp
17044	F6III	12.07	.46	.02	2 2 2	.07	.00	.07	
17045	F5V:	12.76	.47	.05	2 2 2	.21	.05	.36	
17046	F5V	12.49	.49	-.05	2 2 2	.06	.04	.05	
17047	A0V	13.16	.69	.45	2 2 2	.03	.06	.14	uxp Ap?
17048	F	13.02	.57	.32	2 2 2	.05	.06	.01	uxp
17049	F	13.03	.54	-.03	2 2 2	.00	.10	.03	uxp
17050	A	13.34	.64	.52	2 2 2	.02	.12	.01	uxp

Section E3 - 17000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
17051	G:	12.89	.52	.11	2 2 2	.00	.03	.03	ovlp/uxp
17052	F:	13.48	.51	-.08	2 2 2	.04	.05	.03	ovlp/uxp
17053	F0V	11.90	.48	.04	2 2 2	.02	.04	.10	
17054	F8III	12.55	.61	.03	2 2 2	.02	.05	.05	
17055	G8:	13.35	.78	.33	2 2 2	.07	.13	.06	uxp
17056	G5	12.92	.56	-.10	2 2 2	.00	.11	.01	
17057	G5III	11.80	.97	.78	2 2 2	.03	.01	.05	
17058	F6III	10.96	.47	.06	3 2 2	.14	.12	.19	double pg
17059	G0	12.29	.62	.08	2 2 2	.00	.10	.07	ovlp
17060	G8V	11.82	.65	.17	2 2 2	.00	.03	.13	Fe strong
17061	A8V:	11.94	.27	.00	2 2 2	.05	.04	.00	
17062	G0V	12.03	.50	-.01	2 2 2	.01	.02	.09	
17063	F5:	12.28	.47	.03	2 2 2	.03	.07	.13	ovlp
17064	G7	12.08	.64	.03	2 2 2	.04	.02	.02	
17065	A1III:	11.52	.27	.26	2 2 2	.03	.02	.00	
17066	G2	12.05	.70	.50	2 2 2	.01	.01	.01	
17067	G	11.47	.65	.30	2 2 3	.04	.03	.29	ovlp
17068	F0V	11.70	.43	.06	2 2 2	.01	.03	.02	ApEuSr
17069	F7V	11.49	.47	-.05	2 2 2	.00	.01	.01	
17070	K0III	11.03	1.09	1.10	2 2 2	.02	.04	.10	
17071	A0	12.52	.74	.10	2 2 2	.02	.07	.10	
17072	G8	12.93	.49	.01	2 2 2	.08	.02	.08	ovlp
17073	G:	12.48	.76	.07	2 2 2	.02	.05	.06	ovlp
17074	G2III	13.48	.54	-.22	1 2 2	--	.08	.02	uxp
17075	G5V	12.57	.51	.00	2 2 2	.09	.03	.03	pec
17076	G5IV:	12.63	.71	.14	2 2 2	.05	.02	.04	
17101		13.28	.55	.00	2 2 2	.02	.09	.05	
17102		13.06	.57	.13	2 2 2	.01	.01	.06	
17103		13.09	.37	-.11	2 2 2	.06	.03	.01	
17104		12.40	1.47	1.32	2 2 2	.03	.02	.10	
17105		13.28	.68	.21	2 2 2	.00	.04	.04	
17106		13.44	.59	.00	2 2 2	.05	.08	.05	
17107		13.63	.65	-.01	2 2 2	.02	.00	.19	
17108		12.75	.54	-.15	2 2 2	.01	.01	.14	
17109	F0V	7.71	.28	.08	2 2 2	.00	.03	.07	
17110		13.00	.71	.17	2 2 2	.07	.01	.19	
17111		12.24	1.57	1.59	2 2 2	.04	.02	.03	
17112		13.30	.61	.04	2 2 2	.01	.04	.12	
17113		13.57	.60	.06	2 2 2	.16	.02	.10	
17114		11.76	1.72	.29	2 2 2	.10	.06	.02	
17115		13.37	.60	-.03	2 2 2	.01	.14	.13	
17116		10.57	.58	.00	2 2 2	.01	.02	.06	
17117		--	--	--	0 2 0	--	.22	--	
17118		13.14	.71	.16	2 2 2	.00	.01	.03	
17119		13.21	.55	-.14	2 2 2	.02	.09	.03	
17120		12.65	1.32	.03	2 2 2	.02	.04	.01	
17121		12.20	2.53	--	2 1 0	.00	--	--	
17122		12.88	1.88	--	2 1 0	.01	--	--	
17123		12.61	1.88	.62	2 1 2	.02	--	.02	

Section E4 : 18000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
18001	A6V	9.06	.12	.22	2 2 2	.04	.00	.05	
18002	A1V	10.51	.09	.14	2 2 2	.03	.03	.06	
18003	B4V	6.45	-0.15	-0.65	6 0 0	--	--	--	ovxp
18004	G1III	10.27	.55	-.02	2 2 2	.03	.02	.04	
18005	B9V	8.15	.49	-.95	2 2 2	.02	.03	.03	
18006	A5V	10.07	.22	.12	2 2 2	.07	.02	.03	Ap
18007	M0III	8.67	1.53	2.03	2 2 2	.03	.04	.04	
18008	F8V	9.53	.40	-.03	2 2 2	.05	.02	.04	
18009	A6V	10.00	.25	.06	2 2 2	.05	.03	.05	
18010	B9V	9.14	-.03	-.04	2 2 2	.01	.00	.04	
18011	F0V	10.20	.47	.11	2 2 2	.21	.03	.11	double
18012	B9V	8.93	-.17	-.35	2 2 2	.03	.00	.04	ovlp
18013	O9III:	9.04	1.07	-.11	2 2 2	.00	.02	.02	If ovlp
18014	A0V	9.90	.00	-.06	2 2 2	.00	.02	.05	
18015	B9V	--	--	--	2 0 1	.02	--	--	
18016	A2V	8.90	.22	.12	3 2 2	.14	.03	.10	double pg
18017	A1IV	11.47	.19	.16	2 2 2	.00	.03	.10	
18018	G5V	11.17	.63	.12	2 2 2	.06	.03	.07	
18020	B2V	10.22	.50	-.38	2 2 2	.01	.01	.01	ovlp
18021	A0IV	10.84	.01	.30	2 2 2	.06	.02	.12	
18022	B9:	10.10	.04	.06	2 2 2	.01	.01	.06	ovlp
18023	B9V	11.23	.41	-.01	2 2 2	.06	.03	.00	
18024	G0	11.63	.56	.01	2 2 2	.07	.03	.13	
18025	F2V	10.97	.57	-.05	2 2 2	.07	.03	.02	
18026	F3V	11.11	.43	.03	2 2 2	.02	.02	.07	
18027	A2V	11.13	.30	.21	2 2 2	.04	.07	.01	ovlp/Ap?
18028	G	11.09	.49	.04	2 2 2	.01	.04	.00	ovlp
18029	G5:	12.64	.63	.00	2 2 2	.01	.06	.02	
18030	F5	11.04	.47	.07	2 2 2	.01	.03	.05	ovlp
18031	G5V:	11.94	.56	.20	2 2 2	.02	.07	.00	
18032	K0V:	11.80	.80	.38	2 2 2	.02	.04	.03	
18033	G8III:	10.98	.68	.55	2 2 2	.06	.03	.03	
18034	G4	11.48	.57	.18	2 2 2	.03	.09	.06	
18035	F2	12.65	.43	-.04	2 2 2	.05	.08	.05	
18036	G0:	12.88	.54	-.05	2 2 2	.06	.10	.01	uxp
18037	F4V	11.97	.46	-.06	2 2 2	.03	.05	.09	
18038	F5V	11.19	.40	.10	2 2 2	.01	.02	.04	
18039	K0V:	12.69	.49	.01	2 2 2	.04	.10	.17	
18040	A	12.67	.78	.69	2 2 2	.00	.01	.00	ovlp
18041	G	12.47	.70	.37	2 2 2	.03	.04	.09	ovlp
18042	B7V	12.17	.70	.50	2 [illegible]	.04	.08	.00	
18043	F3:	12.94	.41	-.13	2 2 [illegible]	.01	.01	.04	
18044	G8V	11.03	.85	.38	2 2 2	.06	.01	.01	
18045	G8:	12.77	.57	-.04	2 2 2	.05	.11	.06	
18046	K0:	12.31	.61	-.13	2 2 2	.06	.12	.06	
18047	G8:	12.49	.75	.29	2 2 2	.07	.06	.05	ovlp
18048	G5III	11.77	.68	.02	2 2 2	.05	.06	.04	
18049	F8:	12.57	.40	-.11	2 2 2	.14	.01	.08	
18050	K0:	12.51	.65	.05	2 2 2	.08	.01	.18	ovlp/uxp
18051	F	12.24	.37	-.07	2 2 2	.09	.05	.16	ovlp/faint

Section E4 - 18000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
18052	G	12.23	.51	.10	2 2 2	.05	.05	.04	uxp
18053	K	12.52	.92	.59	2 2 2	.06	.04	.20	v.str Fe
18054	F2V:	12.33	.33	-.05	2 2 2	.09	.01	.03	
18055	A2V	12.70	.76	.32	2 2 2	.10	.03	.18	
18057	G5	12.19	.47	-.03	2 2 2	.03	.01	.06	
18058	K	12.57	.48	.05	2 2 2	.02	.06	.03	
18059	G0III:	11.92	.48	.27	2 2 2	.00	.03	.03	
18060	F0V	11.10	.47	.03	2 2 2	.02	.07	.05	
18061	G8	10.74	.86	.54	2 2 2	.02	.02	.01	
18062	A1V	12.70	.37	.23	2 2 2	.09	.02	.04	Ap(SrCrEu)
18063	F5V	11.44	.51	-.04	2 2 2	.07	.00	.07	
18101		13.33	.56	-.07	2 2 2	.07	.05	.06	
18102		13.40	.63	-.10	2 2 2	.00	.02	.13	
18103		13.20	.48	-.08	2 2 2	.08	.01	.10	
18104		12.70	.98	.63	2 3 2	.07	.08	.07	
18105		12.73	.52	-.09	2 2 2	.05	.06	.10	
18106		12.80	.60	.29	2 2 2	.04	.08	.07	
18107		11.64	2.24	--	2 2 0	.04	.06	--	
18108		12.33	.76	.15	2 2 2	.05	.02	.10	
18109		13.13	.56	-.02	2 2 2	.01	.04	.10	
18110		13.34	.51	-.06	2 2 2	.14	.01	.09	
18111		12.16	1.76	.25	2 2 2	.06	.13	.11	
18112		13.31	.61	.02	2 2 2	.06	.00	.08	
18113		13.09	.50	-.09	2 2 2	.10	.03	.05	
18114		12.93	.65	.39	2 2 2	.02	.03	.01	
18115		12.99	.47	-.06	2 2 2	.07	.04	.04	
18116		12.90	.65	.26	2 2 2	.09	.00	.07	
18117		12.83	.47	.07	2 2 2	.12	.02	.09	
18118		12.69	.72	.04	2 2 2	.16	.03	.07	double pg
18119		11.24	.49	-.10	2 2 2	.03	.04	.03	
18120		10.95	.29	.18	2 2 2	.05	.01	.09	
18121		12.87	.49	-.14	2 2 2	.16	.03	.12	
18122		12.41	.53	-.09	2 2 2	.11	.06	.00	
18123		11.71	2.42	--	2 1 0	.07	--	--	
18124		--	--	--	2 0 0	.12	--	--	
18701		12.51	.54	-.09	2 2 2	.07	.06	.05	

Section E5 - 19000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
19001	A1V	11.81	.43	.12	2 2 2	.06	.01	.21	
19002	G8III	8.89	.99	.76	2 2 2	.03	.01	.10	
19003	F9IV	9.13	.46	.05	2 3 2	.05	.04	.12	
19004	B2IV	10.09	.58	-.29	2 2 2	.12	.02	.09	double pg
19005	G8I	10.31	1.23	.97	2 2 2	.12	.04	.01	strong CN
19006	A6V	8.15	.16	.12	2 2 2	.03	.01	.06	
19007	A1V	9.54	-.11	-.08	2 2 2	.06	.00	.05	
19008	A1V	10.83	.14	.16	2 2 2	.12	.02	.08	
19009	F6III	10.60	.33	.03	2 2 2	.08	.02	.07	
19010	A0V	8.89	-.05	-.09	2 2 2	.11	.01	.08	
19011	B9V	10.29	.08	.19	2 2 2	.08	.06	.10	
19012	A0V	9.50	.01	-.03	2 2 2	.15	.04	.11	
19013	B9V	9.15	-.10	-.20	2 2 2	.18	.03	.00	
19014	K1III	10.13	.93	1.05	2 2 2	.18	.10	.02	
19015	G1V	10.55	.49	.19	2 2 2	.17	.06	.05	
19016	B7V:	6.84	-0.13	-0.53	0 0 0	--	--	--	
19017	F8III	8.42	.41	-.07	2 2 2	.04	.02	.02	
19018	F6V	10.70	.46	.05	2 2 2	.09	.09	.07	ovlp
19019	F9V	11.56	.48	-.11	2 2 2	.10	.05	.15	
19020	A0V	12.25	.22	.14	2 2 2	.16	.01	.03	ApSr
19021	F2V	11.60	.41	.03	2 2 2	.18	.12	.11	
19022	A3IV	11.34	.17	.23	2 2 2	.18	.07	.05	
19023	G	11.88	.61	.06	2 2 2	.14	.11	.11	ovlp
19024	F8V	11.96	.59	.00	2 2 2	.12	.05	.03	
19025	F5V:	12.88	.52	-.06	2 2 2	.16	.01	.08	uxp
19026	F5V	13.16	.58	-.03	2 2 2	.20	.09	.02	
19027		13.15	.72	-.08	2 2 2	.20	.03	.00	too faint
19028	F6	12.71	.51	.01	2 2 2	.15	.02	.03	
19029	G0	12.81	1.19	.65	2 2 2	.09	.03	.19	
19030	A6V	12.80	.60	.36	2 2 2	.09	.01	.11	
19031	B8V	12.35	.48	-.14	2 2 2	.12	.08	.16	BpSi4200
19032	A1V	12.53	.50	.29	2 2 2	.03	.04	.11	
19033	F:	12.71	.51	-.09	2 2 2	.12	.02	.17	ovlp/uxp
19034	F0:	13.01	.55	.01	2 2 2	.13	.08	.30	ovlp
19035	F3III	12.44	.57	.21	2 2 2	.11	.01	.11	
19036	F	12.91	.84	.37	2 2 2	.08	.06	.10	uxp
19037	F5V:	11.72	.49	.07	2 2 2	.17	.02	.04	ovlp
19038		11.83	.50	-.10	2 2 2	.05	.01	.00	ovlp
19039	A1V	12.50	.68	.56	2 2 2	.16	.01	.08	
19040	G2	12.45	.59	.17	2 2 2	.20	.11	.17	
19041	F0V	11.58	.35	-.03	2 2 2	.22	.03	.00	double pg
19042	F5V	11.40	.42	.11	2 2 2	.15	.07	.06	
19043	B8V:	11.86	.67	.30	2 2 2	.10	.01	.02	Ap?
19044	B3V:	12.49	1.04	.27	2 2 2	.26	.17	.07	
19045	F0V	12.83	.33	.06	2 2 2	.21	.02	.13	
19046	G	11.83	.58	.19	2 2 2	.19	.04	.04	ovlp
19047	G5	11.65	.61	.20	2 2 2	.04	.10	.07	
19048		11.65	1.51	1.38	2 2 2	.18	.05	.04	ovlp
19049	K0V	11.21	.68	.58	2 2 2	.12	.12	.04	
19050	F8V	12.38	.40	.21	2 2 2	.24	.07	.02	

Section E5 - 19000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
19051	F5I	11.22	.44	.17	2 2 2	.23	.11	.03	
19052	B0V	10.47	1.08	.13	2 2 2	.22	.14	.04	n
19053	G3V:	11.21	.47	.14	2 2 2	.23	.01	.05	
19054	F0V	11.84	.53	.22	2 2 2	.23	.13	.13	
19055	F2	12.21	.32	.15	2 2 2	.36	.17	.00	
19056		12.68	.70	.41	2 2 2	.23	.07	.14	ovlp/uxp
19057	F0III	12.35	.37	.14	2 2 2	.26	.10	.08	
19058	F5V	11.60	.57	.15	2 2 2	.26	.13	.09	
19059	F4	12.67	.49	.04	2 2 3	.24	.11	.02	
19060	F8	12.52	.45	.07	2 2 2	.27	.04	.00	ovlp
19061	F7V	11.96	.54	.09	2 2 2	.18	.00	.02	
19062	F0	12.68	.46	.05	2 2 2	.21	.13	.03	uxp
19063	F8	12.77	.50	.06	2 2 2	.27	.08	.03	uxp
19064	F5V	12.19	.33	.11	2 2 2	.24	.16	.07	
19065	G2III	11.25	.46	.28	2 2 2	.27	.18	.01	
19101		13.13	.57	.30	2 2 2	.34	.12	.03	
19102		13.37	.56	-.06	2 2 2	.29	.02	.03	
19103		13.23	.61	.21	2 2 2	.31	.19	.02	
19104		13.05	.69	.29	2 2 2	.17	.16	.03	
19105		12.88	.47	.16	2 2 2	.23	.20	.04	
19106		13.01	.44	.20	2 2 2	.20	.12	.02	
19107		13.21	.55	.19	2 2 2	.15	.07	.15	
19108		12.64	.50	.00	2 2 2	.19	.02	.02	
19109		13.09	.61	.29	2 2 2	.17	.07	.04	
19110		13.28	.66	-.08	2 2 2	.15	.10	.14	
19111		12.94	.52	.13	1 2 2	--	.12	.08	
19112		12.57	.38	-.08	1 2 2	--	.06	.01	
19113		13.40	.52	-.20	2 2 2	.14	.03	.08	
19114		12.82	.46	.23	2 2 1	.09	.06	--	
19115		12.81	.57	.00	2 2 2	.06	.03	.27	
19116		13.05	.75	.19	2 2 2	.05	.10	.19	
19117		12.48	.48	-.04	2 2 2	.14	.09	.12	
19201		13.00	1.12	.54	2 1 2	.06	--	.16	
19202		12.80	2.32	--	2 1 0	.15	--	--	

Section E6 20000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
20001	A0V	11.03	.05	.24	2 2 2	.24	.04	.02	
20002	A2V	11.00	.09	.34	2 2 2	.27	.07	.05	
20003	G0V	10.69	.70	.50	2 2 2	.28	.16	.06	
20004	G2IV	10.50	.51	.42	2 2 2	.27	.13	.01	
20005	A5IV	11.38	.24	.41	2 2 2	.30	.02	.13	
20006	A1V	10.34	.09	.28	2 2 2	.27	.00	.14	
20007	A1V	10.38	-.01	.23	2 2 2	.20	.08	.14	n
20008	A0V	10.31	-.09	.13	2 2 2	.37	.04	.21	
20009	G9III	9.60	.97	1.26	2 2 2	.34	.12	.21	
20010	A4V	10.38	.20	.54	2 2 2	.30	.03	.36	double pg
20011	F6V	9.16	.51	.27	2 2 2	.33	.00	.18	
20012	A6V	9.71	.09	.40	2 2 2	.45	.00	.23	
20013	B9V	8.81	-.06	-.35	2 2 2	.38	.03	.08	
20014	B9V	5.92	-0.05	-0.10	0 0 0	...	...	...	ovxp
20015	F0V	11.59	.48	.12	2 2 2	.29	.07	.08	
20016	A1V	11.57	.20	.38	2 2 2	.34	.17	.23	
20017	G0V	10.86	.59	.23	2 2 2	.33	.09	.14	
20018	A9IV	11.88	.24	.40	2 2 2	.42	.15	.22	
20019	F9IV:	10.52	.50	.17	2 2 2	.36	.19	.09	
20020	A8V	11.40	.33	.44	2 2 2	.42	.07	.32	
20021	F8III:	10.57	.43	.27	2 2 2	.43	.10	.28	II ?
20022	A6IV	11.19	.26	.32	2 2 2	.37	.14	.31	
20023	A0V	12.28	.24	.43	2 2 2	.51	.09	.28	
20024	K4III:	10.61	1.23	1.63	2 2 2	.36	.03	.23	K3III ?
20025	G1V	11.79	.48	.13	2 2 2	.36	.25	.09	
20026	F8V	12.29	.53	.15	2 2 2	.25	.15	.03	
20027	F3III:	12.61	.44	.17	2 2 2	.30	.11	.11	
20028	G8III	11.07	1.31	1.38	2 2 2	.31	.15	.07	
20029	F4V:	12.87	.54	.19	2 2 2	.35	.14	.07	
20030	A0V:	13.01	.97	.76	2 2 2	.37	.08	.13	uxp
20031	G3V	12.81	.48	.02	2 2 2	.44	.12	.11	
20032	F8:	12.58	.62	.19	2 2 2	.38	.17	.19	
20033	F6V	11.97	.43	.27	2 2 2	.34	.09	.23	
20034	F2V	13.05	.69	.32	2 2 2	.29	.17	.00	
20035	F2V	11.62	.37	.21	2 2 2	.32	.02	.20	
20036	K0III:	11.44	1.73	1.57	2 2 2	.30	.13	.12	
20037	F6:	12.73	.57	.11	2 2 2	.25	.15	.17	
20038	G0V	11.88	.50	.24	2 2 2	.47	.15	.23	
20039	F6III	11.92	.66	.32	2 2 2	.44	.18	.20	double pg
20040	F2V	11.66	.43	.23	2 2 2	.43	.09	.25	double pg
20041	G5III	12.71	.59	.13	2 2 2	.52	.03	.20	
20042	F8V	10.86	.51	.30	2 2 2	.47	.03	.32	double pg
20043	F2I:	13.03	.46	.23	2 2 2	.55	.09	.27	
20044	F8:	12.61	.43	.33	2 2 2	.53	.09	.27	
20045	F5V	12.41	.40	.14	2 2 2	.62	.13	.29	
20046	G3V	12.73	.72	.35	2 2 2	.55	.03	.30	
20047	B1	12.12	1.18	.53	2 2 2	.56	.03	.35	uxp/rednd
20048	F8V	11.90	.41	.36	2 2 2	.47	.10	.36	ovlp
20049	K0III	12.84	.68	.35	2 2 2	.47	.02	.23	
20050	G0:	12.98	.58	.29	2 2 2	.46	.04	.25	uxp

Section E6 - 20000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
20051	F8V	11.92	.50	.39	2 2 2	.43	.01	.34	
20052	F2V	12.98	.53	.47	2 2 2	.40	.01	.30	
20053	K4V	11.85	1.03	1.22	2 2 2	.38	.08	.36	
20054	G3V	12.31	.56	.29	2 2 2	.42	.06	.30	
20055	G6	12.75	.55	.28	2 2 2	.39	.13	.18	
20056	M1I	9.74	2.79	3.13	2 2 1	.33	.05	--	v. red
20057	F5:	12.66	.64	.45	2 2 2	.45	.12	.25	uxp/comp?
20058	G	12.75	.59	.31	2 2 2	.41	.18	.16	uxp
20059	F8V	11.46	.49	.27	2 2 2	.35	.04	.24	
20060	A	11.69	.81	.89	2 2 2	.35	.11	.30	ovlp
20061	F5V	13.02	.51	.09	2 2 2	.53	.00	.42	strong Fe
20062	G6:	13.27	.66	.31	2 2 2	.40	.03	.19	uxp
20063	F8:	13.10	.61	.19	2 2 2	.41	.02	.19	uxp
20101		13.18	.70	.44	2 2 2	.40	.04	.29	
20102		13.54	.51	.14	2 2 2	.40	.01	.35	
20103		13.10	.54	.14	2 2 2	.47	.03	.43	
20104		13.08	.63	.28	2 2 2	.41	.03	.22	
20105		13.12	.67	.37	2 2 2	.40	.06	.19	
20106		13.06	.44	.26	2 2 2	.44	.09	.30	
20107		13.21	.58	.20	2 2 2	.40	.00	.15	
20109		12.98	.32	.27	2 2 2	.32	.11	.02	
20110		13.10	.85	.35	2 2 2	.39	.04	.34	
20111		13.23	.54	.28	2 2 2	.45	.14	.26	
20112		13.44	.59	.23	2 2 2	.44	.07	.34	
20201		12.99	.73	.27	2 2 2	.32	.02	.25	
20202		13.12	1.13	1.17	2 1 1	.32	--	--	
20203		13.53	.41	.27	2 1 2	.29	--	.11	
20204		13.16	.56	.18	2 1 2	.39	--	.16	
20205		13.01	1.85	--	2 1 0	.56	--	--	
20206		13.15	1.77	--	2 1 0	.46	--	--	
20207		13.38	2.22	--	2 1 0	.43	--	--	
20701		11.35	.45	.26	2 2 2	.34	.20	.00	
20702		13.33	.58	.07	2 2 2	.49	.13	.17	

Section F2 - 21000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
21001	F3V	9.86	.35	.13	2 2 2	.03	.10	.04	
21002	A0V	9.11	.06	.11	2 2 2	.03	.06	.08	
21003	K2V	10.24	1.26	1.50	2 2 2	.00	.05	.07	
21004	B9V	8.95	.07	-.13	2 2 2	.07	.03	.07	
21005	A8V	9.79	.26	.22	2 2 2	.01	.00	.00	
21006	A0V	11.02	.05	.28	2 2 2	.01	.08	.01	
21007	A0V	11.29	.23	.25	2 2 2	.04	.02	.06	
21008	A0V	11.17	.19	.45	2 2 2	.09	.01	.09	
21009	G8III	5.87	1.07	0.88	0 0 0				ovxp
21010	B1	9.73	.73	-.14	2 2 2	.04	.01	.04	
21011	A0V	10.30	.11	.21	2 2 2	.09	.04	.06	
21012		12.27	.55	.35	2 2 2	.10	.21	.09	ovlp
21013	F5V	12.03	.38	-.03	2 2 2	.05	.11	.15	
21014	O9:	12.50	.58	-.02	2 2 2	.02	.25	.14	
21015	F2	10.86	.50	.16	3 3 3	.18	.21	.17	double
21016	G8III	9.98	1.06	1.33	2 2 2	.00	.03	.02	
21017	G5III	10.72	1.21	1.02	2 2 2	.03	.10	.05	
21018	A6V	11.89	.40	.19	2 2 2	.12	.13	.00	
21019	B0:	11.92	.51	.04	2 2 2	.03	.01	.09	
21020	F8	12.23	.49	.26	2 2 2	.04	.16	.08	
21021	A4V	11.94	.23	.14	2 2 2	.01	.03	.16	
21022	G	11.30	.61	.18	2 2 2	.02	.14	.04	ovlp
21023	A3V	11.69	.16	.20	2 2 2	.02	.12	.07	
21024	A0V	12.44	.72	.70	2 2 2	.07	.13	.05	
21025	G3V:	12.47	.51	.21	2 2 2	.02	.13	.07	
21026	F6V	10.90	.34	.16	2 2 2	.02	.15	.15	
21027	K0	11.35	.85	.77	2 2 2	.02	.13	.10	
21028	F2III:	11.49	.27	.08	2 2 2	.02	.17	.12	
21029	B0:	11.95	.46	-.09	2 2 2	.01	.13	.06	ovlp
21030	B2III	12.42	.51	.13	2 2 2	.03	.16	.08	
21031	F2III	11.59	.37	.12	2 2 2	.10	.14	.05	
21032	A0:	12.95	.52	.45	2 2 2	.05	.16	.10	ApS:4200 ?
21033	B9V	13.11	.42	.19	2 2 2	.12	.24	.15	
21034	B0V	12.70	.56	.03	2 2 2	.11	.24	.15	
21035	K5	11.69	1.63	1.49	2 2 2	.07	.19	.16	
21036	F6	12.48	.26	.20	2 2 2	.02	.19	.20	
21037	A4V:	12.58	.18	.33	2 2 2	.11	.16	.09	ovlp
21038	G5	11.54	.49	.35	2 2 2	.09	.13	.07	
21039	A1V	12.84	.46	.55	2 2 2	.08	.25	.07	
21040	A3	10.24	1.71	2.49	2 2 2	.05	.06	.03	ovlp
21041	G8V	11.27	.75	.52	2 2 2	.07	.11	.03	subdwarf ?
21042	G4III:	11.15	.59	.66	2 2 2	.08	.15	.04	strong CN?
21043	G0III:	11.43	.55	.19	2 2 2	.06	.19	.04	
21044	A1V	11.23	.15	.48	2 2 2	.04	.10	.04	double pg
21045	F6III	10.98	.42	.27	2 2 2	.04	.09	.01	
21046	A9V	12.00	.23	.19	2 2 2	.04	.16	.06	
21047	F7V	11.40	.46	.17	2 2 2	.00	.07	.09	
21048	G2III	11.74	.65	.27	2 2 2	.01	.08	.10	
21049	G3V:	12.30	.54	.07	2 2 2	.07	.09	.08	
21050	G5	12.07	.49	.19	2 2 2	.00	.10	.14	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
21051	B5V	10.87	.79	-.02	2 2 2	.02	.04	.05	
21052	F2V	11.93	.39	.14	2 2 2	.02	.02	.02	
21053	F5V	11.46	.45	.11	2 2 2	.05	.03	.04	
21054	F2	11.80	.36	.04	2 2 2	.06	.01	.01	ovlp
21055	F5	12.05	.53	.08	2 2 2	.02	.01	.02	ovlp
21056	B2III	12.40	.72	-.12	2 2 2	.01	.01	.01	
21057	A0III	11.95	.85	-.03	2 2 2	.03	.09	.13	
21058	B5V	10.95	.68	-.03	2 2 2	.01	.06	.01	
21059		11.44	1.56	1.55	2 2 2	.07	.02	.02	ovlp
21060	G2III:	11.31	.60	.34	2 2 2	.01	.01	.10	
21061	G0V	11.67	.50	.21	2 2 2	.01	.02	.09	
21062	F8V	10.64	.50	.35	2 2 2	.09	.01	.00	
21063	B:	11.39	.57	.16	2 2 2	.04	.33	.41	double
21064	G8V:	12.47	.59	.22	2 2 2	.09	.10	.09	
21065	B	11.69	1.03	.24	2 2 2	.10	.01	.11	ovlp
21066	A1V	12.23	.46	.24	2 2 2	.16	.07	.19	double pg
21067	F4V:	12.55	.44	.25	2 2 2	.09	.09	.00	
21068	K2V:	11.87	1.19	.95	2 2 2	.01	.04	.02	
21069	F5:	13.00	.47	.05	2 2 2	.08	.21	.05	
21070	B5:	13.36	.36	.28	2 2 2	.09	.19	.08	uxp
21071	F5	12.97	.30	.07	2 2 2	.01	.17	.14	
21072		11.81	1.59	1.89	2 2 2	.15	.11	.06	ovlp
21073	M3III	12.09	.33	.39	2 2 2	.02	.15	.16	ovlp
21074	O8V	12.03	.65	.36	2 2 2	.03	.02	.06	
21075	B0V	12.37	.84	.17	2 2 2	.12	.11	.13	n.
21076	F5V	12.39	.40	.11	2 2 2	.04	.04	.07	
21077	A5:	12.48	.59	.14	2 2 2	.03	.02	.07	ovlp
21078	G8:	12.61	.69	.37	2 2 2	.01	.03	.01	
21079	A0V:	12.90	.65	.59	2 2 2	.03	.04	.05	ovlp
21080	K3III:	12.25	.80	.61	2 2 2	.01	.03	.06	
21101		12.86	.61	-.28	2 2 2	.00	.17	.15	
21102		12.98	.71	.41	2 2 2	.06	.08	.09	
21103		12.35	.95	.19	2 2 2	.01	.10	.03	
21104		13.20	.50	.00	2 2 2	.03	.23	.02	
21105		13.18	.49	-.08	2 2 2	.12	.08	.03	
21106		13.06	.30	.04	2 2 2	.11	.21	.06	
21107		12.69	.89	.87	2 2 2	.02	.10	.07	
21108		13.24	.38	-.01	2 2 2	.04	.26	.15	
21109		13.05	.53	.23	2 2 2	.04	.15	.08	
21110		13.23	.57	.17	2 2 2	.03	.16	.03	
21111		12.73	.78	.10	2 2 2	.05	.09	.04	
21112		11.88	1.21	.33	2 2 2	.05	.11	.08	
21113		11.42	1.92	2.01	2 2 1	.05	.03	--	
21114		12.19	.38	.20	2 2 2	.05	.21	.02	
21115		12.45	.57	.44	2 2 2	.19	.27	.14	
21116		13.20	.73	.39	2 2 2	.08	.23	.11	
21117		13.19	.35	.04	2 2 2	.05	.28	.08	
21118		12.73	.99	.96	2 2 2	.05	.01	.13	
21119		12.91	1.01	-.09	2 2 2	.07	.04	.03	
21120		12.75	1.12	.24	2 2 2	.02	.06	.02	

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
21121		12.88	.48	.05	2 2 2	.03	.08	.00	
21122		12.76	.69	.22	2 2 2	.01	.03	.12	
21123		12.70	.41	.10	2 2 2	.03	.06	.07	
21124		13.47	.54	-.14	2 2 2	.07	.00	.07	
21125		11.71	1.57	1.64	2 2 2	.00	.03	.10	
21126		12.98	.77	.16	2 2 2	.01	.18	.01	
21127		12.85	.99	.52	2 2 2	.06	.08	.06	
21128		13.21	.84	.52	2 2 2	.00	.07	.19	
21129		13.00	.38	.13	2 2 2	.04	.00	.11	
21201		12.62	2.39	--	2 1 0	.07	--		
21202		12.71	2.23	--	2 1 0	.16	--		
21203		12.93	2.21		2 1 0	.08			
21204		12.53	1.91	--	2 1 0	.06	--		
21205		13.06	.56	.21	2 1 2	.01		.04	
21206		11.64	2.26	--	3 3 0	.02	.02	--	
21207		12.75	1.60	1.01	2 1 2	.04		.04	
21208		12.08	1.84	--	2 1 0	.02		--	

Section F3 - 22000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
22001	K0III:	10.13	1.02	1.23	2 2 2	.03	.09	.16	strong CN
22002	K0III	7.33	1.14	1.00	0 0 0	--	--	--	
22003	B9V	10.87	.22	.33	2 2 2	.05	.05	.09	
22004	A5V	10.91	.26	.18	2 2 2	.03	.00	.07	ApSrII
22005	A2V	10.29	.11	.24	2 2 2	.02	.01	.08	
22006	A3V	10.30	.14	.26	2 2 2	.07	.00	.11	
22007	B9V	10.65	.72	.51	2 2 2	.09	.06	.11	
22008	B9IV	8.57	.72	.24	2 2 2	.05	.04	.08	
22009	G5V	9.96	.80	.40	2 2 2	.04	.06	.16	
22010	F0V	10.09	.24	.31	2 2 2	.11	.02	.04	
22011	F0III	10.89	.34	.19	2 2 2	.01	.04	.09	
22012	G7III	9.82	.95	1.03	2 2 2	.02	.02	.01	
22013	F2V	10.49	.35	.23	2 2 2	.03	.02	.07	
22014	A0V	11.85	.38	.44	2 2 2	.03	.04	.07	ovlp
22015		12.45	.67	.19	2 2 2	.03	.10	.14	ovlp
22016	B8V	12.31	.48	.55	2 2 2	.07	.00	.02	
22017	G4:	12.45	.54	.11	2 2 2	.04	.02	.07	
22018	B9:	13.07	.77	.64	2 2 2	.01	.07	.05	uxp
22019	A0V	12.12	.50	.52	2 2 2	.01	.01	.05	
22020	G0IV:	12.24	.53	.12	2 2 2	.02	.06	.04	
22021	G8	11.06	.79	.47	2 2 2	.01	.03	.04	ovlp
22022	A5V	10.72	.09	.23	3 3 3	.18	.19	.39	double pg
22023		10.37	.57	-.17	2 2 2	.08	.02	.02	ovlp
22024	F8V:	12.03	.49	.10	2 2 2	.04	.00	.04	
22025	B3V	11.66	.79	.00	2 2 2	.00	.02	.00	
22026	A:	12.24	.84	.08	2 2 2	.00	.06	.07	Ap/uxp
22027	G0V:	11.88	.65	.01	2 2 2	.05	.06	.10	double pg
22028	A3IV	11.62	.04	.16	2 2 2	.02	.03	.10	
22029	G	12.51	.57	.14	2 2 2	.02	.02	.06	uxp
22030	G	12.81	.60	.06	2 2 2	.03	.05	.04	uxp
22031	G2III:	11.87	.64	.20	2 2 2	.04	.03	.07	
22032	F5:	12.33	.54	.04	2 2 2	.07	.02	.06	ovlp
22033	A2V	11.81	.21	.33	2 2 2	.01	.04	.04	
22034	F5	11.83	.43	.09	2 2 2	.08	.00	.00	
22035	G5V:	11.55	.55	.17	2 2 2	.00	.01	.13	
22036	G2:	10.47	.57	.10	2 2 2	.07	.02	.16	ovlp
22037	F5	11.61	.30	.13	2 2 2	.03	.06	.11	ovlp
22038	F5V:	11.01	.40	.16	2 2 2	.04	.01	.13	ovlp
22039	F7III	12.07	.54	.23	2 2 2	.07	.04	.04	
22040	G0V	11.79	.49	.13	2 2 2	.05	.01	.09	
22041	G	12.29	.53	.26	2 2 2	.03	.01	.18	uxp
22042	F5	11.70	.41	.05	2 2 2	.02	.00	.06	
22043	A2III	11.88	.25	.20	2 2 2	.02	.00	.12	
22044	G	12.56	.59	.21	2 2 2	.05	.11	.07	ovlp
22045	F8V	12.18	.46	.09	2 2 2	.04	.07	.06	
22046	F5V:	11.02	.45	.14	2 2 2	.00	.06	.08	
22047	G2III	12.70	.75	.49	2 2 2	.00	.02	.00	
22048	F6V	11.44	.48	.12	2 2 2	.04	.01	.06	
22102		12.55	.90	.86	2 2 2	.06	.07	.10	
22103		13.27	.81	.52	2 2 2	.07	.06	.11	

Section F3 22000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
22104		12.72	.43	.05	2 2 2	.03	.08	.02	
22105		13.36	.60	.16	2 2 2	.04	.12	.12	
22106		12.22	1.53	1.38	2 2 2	.00	.06	.01	
22107		13.29	.65	.57	2 2 2	.08	.07	.05	
22108		13.12	.62	.17	2 2 2	.03	.08	.01	
22109		12.85	.81	.70	2 2 2	.01	.03	.13	
22110		11.93	1.75	1.72	2 2 2	.07	.01	.01	
22111		13.32	.54	.00	2 2 2	.04	.01	.06	
22112		12.96	.56	.11	2 2 2	.01	.04	.02	
22113		13.22	.75	.26	2 2 2	.05	.08	.03	
22114		11.92	1.36	1.23	2 2 2	.04	.01	.02	
22115		12.72	.70	.39	2 2 2	.02	.08	.03	
22116		12.88	1.23	.13	2 2 2	.05	.03	.07	
22117		12.77	.77	.45	2 2 2	.01	.04	.11	
22118		12.96	.49	.15	2 2 2	.06	.00	.07	
22119		12.02	1.59	1.38	2 2 2	.06	.03	.11	
22120		13.07	.50	.25	2 2 2	.03	.02	.01	
22121		13.16	.53	.07	2 2 2	.07	.06	.03	
22122		13.01	.55	.17	2 2 2	.07	.07	.12	
22123		12.70	.80	.44	2 2 2	.03	.06	.02	
22124		12.56	.51	.05	2 2 2	.07	.05	.01	
22125		12.83	.55	.09	2 2 2	.10	.06	.06	
22126		12.99	.74	.37	2 2 2	.01	.04	.03	
22127		12.65	.24	.35	2 2 2	.02	.19	.11	
22128		13.20	.46	-.07	2 2 2	.06	.01	.01	
22129		12.88	.60	.22	2 2 2	.02	.03	.03	
22201		12.39	1.63	--	2 1 0	.00			
22202		12.64	1.65	1.37	1 1 1				
22203		12.76	2.23	--	2 1 0	.03			
22204		12.78	1.92	--	2 1 0	.09			

Section F4 - 23000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
23001	B6I	9.06	.04	-.15	2 2 2	.05	.00	.02	
23002	F5V	10.42	.31	.11	2 2 2	.01	.01	.11	
23003	A0V	11.21	.23	.21	2 2 2	.08	.06	.16	
23004	A0V	8.08	-.05	.05	2 2 2	.05	.01	.05	
23005	F0V	10.80	.31	.17	2 2 2	.09	.01	.11	
23006	A5V	8.72	.14	.27	2 2 2	.09	.00	.04	A3mA5-A9
23007	F4V	8.92	.45	.09	2 2 2	.05	.02	.06	
23008	K0III	10.22	.98	.91	2 2 2	.08	.01	.09	
23012	A0V	10.00	.04	.16	2 2 2	.09	.02	.12	
23013	A0V	10.77	.08	.36	2 2 2	.08	.05	.16	
23014	B9V	9.19	-.02	.00	2 2 2	.01	.01	.03	
23015	B9V	8.95	-.06	-.21	2 2 2	.01	.03	.03	
23016	B1III	9.34	.92	.01	2 2 2	.02	.04	.06	Ib
23017	A0V	9.94	.01	.12	2 2 2	.00	.07	.03	
23018	F4III	12.16	.44	.03	2 2 2	.02	.03	.03	
23019	G0V	10.83	.51	.14	2 2 2	.07	.01	.04	
23020	A2IV:	12.08	.51	.11	2 2 2	.06	.05	.08	ovlp/ApSr
23021	B9V	12.53	.50	.62	2 2 2	.04	.01	.11	
23022	F0V	11.30	.33	.15	2 2 2	.12	.03	.08	
23023	F0V	11.37	.39	.08	2 2 2	.06	.00	.10	
23024	F8V	12.12	.71	.12	2 2 2	.09	.06	.02	
23025	K0V	11.52	.91	.31	2 3 2	.01	.05	.03	double pg
23026	G2III	12.03	.50	.27	2 2 2	.07	.04	.13	
23027	O9	11.21	.91	-.05	2 2 2	.12	.01	.07	
23028	F7V	11.30	.53	.06	2 2 2	.10	.01	.10	
23029	G2IV	11.64	.52	.05	2 2 2	.15	.04	.14	
23030	O8	10.82	.93	.17	2 2 2	.15	.07	.08	
23031	A4V	11.96	.35	.26	2 2 2	.21	.03	.03	ApSr
23032	B7V	11.97	.78	-.02	2 2 2	.14	.00	.10	
23033	F8	13.41	.59	.12	2 2 2	.08	.00	.09	
23034	K2	12.57	.90	.40	2 2 2	.06	.04	.13	
23035	A1IV	11.60	.26	.13	2 2 2	.07	.08	.03	
23036	A0V	11.75	.60	.22	2 2 2	.05	.09	.01	
23037	F0V	11.55	.30	.05	2 2 2	.00	.02	.04	
23038	G2III	12.05	.57	-.02	2 2 2	.00	.01	.02	double pg
23039	G0:	12.56	.62	.08	2 2 2	.07	.05	.11	
23040		9.43	2.65	2.04	2 2 2	.05	.07	.11	ovpl
23041	G	11.55	.96	.49	2 2 2	.05	.06	.07	ovlp
23042	B9V	12.68	.68	.42	2 3 2	.03	.08	.03	BpSi
23043	G8	10.57	.68	.27	2 2 2	.04	.02	.08	
23044	F0V	11.05	.44	.05	2 2 2	.02	.06	.10	
23045	G8	12.32	.75	.37	2 2 2	.04	.01	.13	
23046	G0V	12.30	.57	.15	2 2 2	.01	.07	.14	
23047	G8	12.39	.04	.38	2 2 2	.13	.10	.01	
23048	F5	12.21	.59	.16	2 2 2	.09	.03	.15	
23049	F8V	12.73	.39	.15	2 2 2	.06	.09	.04	
23050	B9V:	12.95	.63	.41	2 3 2	.07	.05	.05	uxp
23101		12.01	.93	.02	2 2 2	.14	.07	.11	
23102		12.95	.58	.16	2 2 2	.13	.05	.07	
23103		13.35	.44	.21	3 2 2	.08	.03	.02	

Section F4 = 23000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
23104		13.23	.49	-.02	2 2 2	.18	.06	.02	
23105		13.04	.92	.64	2 2 2	.00	.00	.06	
23106		12.82	.46	.08	2 2 2	.09	.01	.13	
23107		12.94	.58	.23	2 2 2	.04	.03	.02	
23108		13.02	.48	.02	2 2 2	.02	.03	.06	
23109		11.89	1.93	1.84	2 2 1	.05	.04		
23110		13.04	.54	-.03	2 2 2	.07	.13	.02	
23111		11.79	1.59	1.50	2 2 2	.05	.09	.04	
23112		12.55	1.06	1.07	2 2 2	.01	.10	.12	
23113		13.05	.46	.05	2 2 2	.04	.02	.04	
23114		12.17	.10	.38	2 2 2	.13	.20	.20	
23115		13.32	.72	.10	2 2 2	.10	.01	.20	
23116		13.38	.61	.17	2 2 2	.00	.01	.00	
23117		12.69	.44	.07	2 2 2	.02	.03	.02	
23118		13.10	.52	.10	2 2 2	.05	.02	.09	
23119	A0V	12.65	.95	.56	3 2 2	.02	.06	.09	
23120		12.23	.91	.62	2 2 2	.02	.01	.05	
23121		13.02	.51	.06	2 2 2	.03	.04	.10	
23122		12.91	.73	.31	2 2 2	.01	.04	.19	
23123		12.89	.58	.23	2 2 2	.07	.03	.06	
23201		12.04	1.54	1.32	2 1 2	.02		.05	
23202		12.40	1.73	1.42	2 1 1	.01			
23203		13.10	1.72	--	2 1 0	.04			
23501		--			1 0 0	--			
23502		--	--	--	1 0 1	--			

Section F5 – 24000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
24001	K1V	9.88	1.28	1.55	2 2 2	.04	.08	.08	
24002	A0V	10.19	.09	.19	2 2 2	.05	.03	.03	
24003	K1III	10.26	.98	.98	2 2 2	.01	.08	.11	
24004	K0III	9.04	1.11	1.07	2 2 2	.04	.06	.09	
24005	F0IV	10.84	.41	.27	2 2 2	.03	.06	.02	
24006	K0III	8.43	1.06	.86	2 2 2	.01	.01	.04	
24007	A1V	11.08	.20	.32	2 2 2	.10	.20	.19	ApSi
24008	A0V	10.82	.16	.22	2 2 2	.05	.05	.03	Ap
24009	K1III	8.06	1.07	.83	2 2 2	.02	.06	.02	
24010	G5III	7.81	.94	.66	2 2 2	.00	.02	.02	
24011	F4V	8.70	.55	.15	2 2 2	.06	.03	.06	
24012	A9IV	10.86	.26	.45	2 2 2	.04	.11	.22	ApEuCr/uxp
24013	A1V	12.74	.62	.54	2 2 2	.01	.03	.18	
24014	F0III	12.50	.37	.13	2 2 2	.11	.06	.06	
24015	F0	11.77	.51	.20	2 2 2	.18	.10	.10	
24016	F0III	12.60	.45	.18	2 2 2	.06	.07	.10	
24017	G5	10.76	1.44	.98	2 2 2	.00	.19	.05	double
24018	F2V	11.87	.51	.13	2 2 2	.02	.12	.03	
24019	F5V	11.87	.40	.12	2 2 2	.00	.04	.06	pec SrII
24020	G3V	11.27	.83	.36	2 2 2	.07	.06	.08	
24021	G7V	10.98	.77	.40	2 2 2	.05	.03	.03	
24023	K4III	10.11	2.00	2.46	2 2 2	.01	.05	.08	
24024	F4V	11.72	.48	-.08	2 2 2	.05	.04	.07	
24025	G0V	12.42	.46	.05	2 2 2	.11	.16	.05	
2[illegible]	G8V:	12.66	.53	-.14	2 2 2	.04	.07	.06	
24027	G2III:	12.58	.64	.13	2 2 2	.04	.06	.05	v.str Fe
24028	G3V:	11.06	.62	.25	2 2 2	.08	.08	.18	
24029	F2V	11.66	.53	.22	2 2 2	.00	.07	.21	
24030	A9V	11.33	.34	.37	2 2 2	.01	.10	.24	
24031	G0III	11.24	.55	.23	2 2 2	.02	.10	.13	
24032	G8	12.40	.81	.57	2 2 2	.08	.13	.21	ovlp
24033	G2:	12.46	.58	.15	2 2 2	.05	.09	.24	
24034	F5V:	12.49	.45	.18	2 2 2	.09	.15	.10	
24035	G8V:	12.22	.83	.59	2 2 2	.02	.12	.08	*
24036	G8	11.80	.61	.06	2 2 2	.00	.08	.07	double pg
24037	G	12.39	.64	.28	2 2 2	.04	.15	.04	uxp
24038	G2V	12.08	.66	.20	2 2 2	.08	.04	.01	
24039	K0III	12.03	.95	.81	2 2 2	.06	.13	.07	
24040	B6V	12.76	.82	.59	2 2 2	.03	.10	.05	
24041	F2V	12.03	.47	.14	2 2 2	.08	.08	.06	
24042	G5V:	11.80	.76	.54	2 2 2	.02	.17	.17	
24043	B2	11.67	.97	.44	2 2 2	.12	.22	.10	Be
24044	F5:	12.42	.52	.10	2 2 2	.11	.10	.05	ovlp
24045	A0V	12.76	.72	.57	2 2 2	.12	.11	.03	pec?/ovlp
24046	G5II:	12.40	.63	.11	2 2 2	.06	.14	.07	
24047	A0	12.83	.99	.68	2 2 2	.05	.11	.10	ApSi
24048	G	12.58	.72	.49	2 2 2	.11	.17	.11	ovlp
24049	G	12.04	.75	.16	2 2 2	.00	.11	.16	ovlp
24050	F5:	12.71	.41	.02	2 2 2	.07	.01	.03	double
24051	G2:	12.88	.55	.25	2 2 2	.05	.07	.09	uxp

Section F5 - 24000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
24101		13.39	.72	.03	2 2 2	.08	.03	.07	
24102		12.92	.57	.09	2 2 2	.02	.06	.05	
24103		12.01	.67	.19	2 2 2	.07	.08	.03	
24104		12.93	.52	.27	2 2 2	.09	.05	.06	
24105		12.61	.55	.05	2 2 2	.01	.04	.10	
24106		13.09	.70	.47	2 2 2	.04	.02	.03	
24107		13.27	.67	.71	2 2 2	.05	.02	.12	
24108		13.00	.75	.21	2 2 2	.03	.03	.05	
24109		13.22	.65	.23	2 2 2	.00	.13	.04	
24110		13.07	.51	.25	2 2 2	.01	.05	.10	
24111		12.84	.80	.51	2 2 2	.02	.06	.12	
24115		13.12	.70	.70	2 2 2	.14	.12	.24	
24113		12.74	.66	.29	2 2 2	.04	.05	.16	
24201		12.55	1.74	1.29	2 1 1	.01	--	-	

Section F6 - 25000+

No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
25001	F3IV	9.88	.54	.15	2 2 2	.01	.01	.15	
25002	A0V	9.98	.11	.17	2 2 2	.03	.05	.05	
25003	K0V	10.46	.75	.45	2 2 2	.03	.08	.16	
25004	A3V	10.06	.32	.37	2 2 2	.03	.04	.14	
25005	A1V	9.38	.29	.31	2 2 2	.01	.06	.15	
25006	A0V	8.81	.35	.17	2 2 2	.07	.04	.17	
25007	A0V	10.19	.19	.11	2 2 2	.04	.18	.27	double pg
25008	A1V	10.18	.30	.27	2 2 2	.02	.03	.30	
25009	K0IV	8.57	1.67	1.71	2 2 2	.09	.11	.23	
25010	G3III	10.01	.90	.41	2 2 2	.07	.08	.32	
25011	F4V	10.64	.74	.25	2 2 2	.01	.05	.28	
25012	A1V	10.56	.29	.35	2 2 2	.05	.04	.27	Ap
25013		11.80	1.37	1.17	2 2 2	.03	.06	.18	ovlp
25014	F7	10.43	.62	.15	2 2 2	.05	.05	.30	ovlp
25015	F0	11.35	.42	.41	2 2 2	.10	.05	.12	
25016	A3V	12.91	.62	.17	2 2 2	.05	.13	.18	
25017	G2I:	13.13	.68	.23	2 2 2	.19	.03	.13	µxp
25018	F8I	11.99	.75	.35	2 2 2	.07	.11	.21	Ib
25019	F0	12.25	.51	.29	2 2 2	.06	.09	.34	
25020	F5V	10.65	.61	.34	2 2 2	.00	.14	.16	
25021	F5V	10.64	.60	.31	2 2 2	.00	.04	.14	
25022		11.41	.51	.27	2 2 2	.11	.11	.15	ovlp
25023	F5	11.30	.50	.24	2 2 2	.05	.09	.21	ovlp
25024	F5V	11.53	.63	.20	2 2 2	.00	.03	.20	
25025		11.40	.58	.67	2 2 2	.04	.10	.26	ovlp
25026	A1V	11.66	.53	.64	2 2 2	.07	.09	.25	
25027	F0V	11.61	.54	.26	2 2 2	.00	.06	.28	
25028	F2V	11.33	.66	.30	2 2 2	.07	.03	.15	
25029	A1V	12.83	.80	.54	2 2 2	.11	.03	.25	
25030	B9V	11.44	.64	.66	2 2 2	.06	.03	.28	
25031	G2V	10.21	.78	.40	2 2 2	.01	.05	.21	
25032	F2III	10.93	.57	.26	2 2 2	.02	.10	.23	
25033	A5V	10.75	.43	.38	2 2 2	.02	.06	.21	
25034	G8	10.70	1.05	1.01	2 2 2	.00	.10	.16	
25035	F2V	12.39	.63	.26	2 2 2	.01	.09	.19	
25036	F2V	11.94	.50	.27	2 2 2	.02	.05	.23	
25037	F8III:	11.43	.76	.33	2 2 2	.01	.03	.31	
25038	G0	10.47	.70	.33	2 2 2	.02	.04	.21	ovxp
25039	F5V	11.87	.57	.17	2 2 2	.07	.05	.27	
25040	F8V	11.26	.75	.32	2 2 2	.07	.07	.24	
25041	A3III	11.97	.56	.29	2 2 2	.07	.07	.30	
25042	F5	11.09	.63	.63	2 2 2	.07	.04	.30	
25043	M0III	11.28	2.20	1.74	2 2 1	.04	.21		
25044	G7	11.96	1.04	.62	2 2 2	.02	.07	.44	
25045	G4	12.54	.87	.42	2 2 2	.12	.02	.35	
25046	G5V	11.40	.99	.48	2 2 2	.04	.12	.37	
25047	G0IV	12.21	.88	.24	2 2 2	.07	.13	.35	
25048	B9V	12.77	.83	.64	2 2 2	.12	.00	.26	
25049	F5V	12.29	.75	.21	2 2 2	.13	.03	.37	
25050	A5V	11.36	.77	.59	2 3 2	.29	.11	.62	double pg

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No.	Sp	V	B-V	U-B	n	σ_V	σ_B	σ_U	notes
25051	K0	12.32	.97	.43	2 2 2	.08	.13	.30	
25052	F0V	11.48	.68	.24	2 2 2	.04	.07	.30	
25053	G5V	11.86	.82	.35	2 2 2	.06	.04	.29	
25054	F6V	11.46	.58	.20	2 2 2	.08	.09	.24	
25055	G8V	11.13	.83	.52	2 2 2	.08	.05	.31	
25056	K0V:	12.08	.96	.66	2 2 2	.06	.07	.22	
25057	G0V	12.55	.75	.25	2 2 2	.11	.06	.17	
25058	A1V	12.11	.74	.70	2 2 2	.06	.05	.26	pec?
25059	F2V	12.82	.66	.18	2 2 2	.06	.01	.24	
25060	A0III	11.58	1.38	.87	2 2 2	.07	.05	.24	
25061	K5V:	11.78	1.61	1.17	2 2 2	.06	.06	.20	ovlp
25062	G5V:	12.62	.92	.47	2 2 2	.07	.03	.35	ovlp
25063	G:	12.49	1.02	.75	2 2 2	.08	.07	.19	ovlp
25064	K2V	11.08	1.76	1.50	2 2 2	.12	.01	.20	uxp
25065	F7V:	12.30	.63	.25	2 2 2	.07	.05	.24	
25066	G3	12.68	.68	.42	2 2 2	.08	.10	.25	uxp
25067	G8V	12.36	.83	.48	2 2 2	.02	.08	.16	
25068	G	13.09	.86	.57	2 2 2	.03	.02	.31	uxp
25069	G7:	12.80	.80	.50	2 2 2	.09	.02	.27	
25070	F5III	12.83	.67	.24	2 2 2	.06	.05	.29	uxp
25071	G0:	12.94	.90	.09	2 2 2	.03	.03	.32	uxp
25072	K1	12.63	.99	.56	2 2 2	.09	.11	.35	
25073	G:	13.05	.82	.28	2 2 2	.05	.10	.23	ovlp
25074	G5III	12.30	.87	.45	2 2 2	.07	.02	.25	
25075	G2:	13.03	.63	.08	2 2 2	.11	.12	.24	uxp/ovlp
25076	F:	13.10	.77	.35	2 2 2	.07	.01	.22	uxp/ovlp
25077	A2V:	13.37	1.04	.81	2 2 2	.13	.04	.43	uxp
25078	G0:	13.01	.83	.32	2 2 2	.16	.01	.37	uxp
25101		12.72	.70	.13	2 2 2	.09	.02	.09	
25102		12.85	.93	.21	2 2 2	.11	.03	.15	
25103		12.97	.71	.32	2 2 2	.02	.02	.24	
25104		12.91	.83	.29	2 2 2	.11	.11	.22	
25105		13.30	.77	.30	2 2 2	.04	.04	.29	
25106		13.06	.64	.28	2 2 2	.12	.01	.10	
25107		11.24	1.11	.88	2 2 2	.06	.10	.24	
25108		12.91	1.02	.54	2 2 2	.02	.05	.28	
25109		12.93	.97	.43	2 2 2	.03	.01	.37	
25201		13.38	1.57	.70	2 1 1	.17	-	- -	
25202		12.64	2.57	--	2 1 0	.05			
25203		13.15	1.48	1.01	2 1 1	.11	--	- -	
25204		13.00	.82	.28	2 1 2	.00	--	.35	
25205		12.37	2.82	--	2 1 0	.03	--		

Appendix C

Cross-Reference Between MW268 and HD, SAO and LS Numbering Systems

MW268 - HD - SAO Cross Reference

MW268	HD	SAO
1003	76588	220667
1010	76873	220693
1011	76725	220674
2005	77453	220757
2014	77812	220782
3005	78059	
3007	78116	220812
3008	78132	
3013	78325	
3014	78341	220847
3016	78485	
3017	78503	220864
4004	78833	
4007	78907	
4009	78943	
4010	78976	220904
4012	78305	220843
4012	79134	220923
4013	79170	
5002	79403	220948
5004	79386	220947
5007	79332	220943
5013	79811	220985
5014	79900	220998
5015	79619	
5017	79620	
5019	79646	
6001	76567	220661
6003	76649	220671
6004	76744	220677
6011	77046	220705
7003	77651	220768
7007	77741	220776
7015	77433	220756
8001	77942	220797

MW268	HD	SAO
8006	77978	
8007	78021	
8008	78098	
8009	78149	
8010	78203	220825
8012	78473	220863
8013	78472	220862
8014	78527	220866
8015	78342	220844
9001	78628	
9004	78709	
9005	78785	220888
9007	78684	220877
9011	79022	220909
9012	79061	220914
9013	79135	
9014	79198	
9015	79242	220934
9017	79089	
10001	79274	
10002	79296	220939
10004	79473	
10009	79647	
10010	79791	220982
10012	79882	220993
10014	79819	
10015	79832	220988
11004	76589	220668
11005	76650	220670
11012	77115	220710
11014	77117	
11015	77116	
12002	77384	220741
12004	77344	
12008	77718	220773

MW268 - HD - SAO Cross Reference

MW268	HD	SAO
12009	77652	
12011	77769	220779
12013	77851	
13001	77903	
13002	77924	
13003	78004	220803
13004	78186	220821
13006	78133	220819
13007	78099	220810
13008	78022	
13009	78003	
13015	78343	
13018	78458	220861
13019	78385	220850
14001	78580	
14002	78649	
14003	78814	
14006	78759	
14007	78710	
14008	78648	220876
14010	78597	
14013	78894	
14014	78944	
14015	78961	
14017	79118	
14018	79230	
14019	79155	
14020	79070	220917
14021	79038	
15001	79312	220940
15002	79405	
15003	79404	
15005	79544	
15006	79543	
15007	79275	220937
15008	79716	
15009	79649	
15010	79772	220979
15011	79812	
15013	79918	
15014	79883	
15017	79648	
16001	76470	
16004	76517	220657
16005	76536	220658
16006	76556	220662
16007	76535	220659
16012	76693	
16013	76803	220684
16710	77140	220717
17002	77304	
17003	77303	220732
17004	77402	
17005	77476	
17006	77400	220744
17007	77401	
17009	77271	
17010	77552	
17011	77553	
17012	77613	
17013	77634	
17014	77719	
17100	77511	220759
18001	77925	220794
18002	78040	
18003	78005	220802
18005	77904	220793
18006	77943	
18007	78243	
18008	78267	220833

MW268 - HD - SAO Cross Reference

MW268	HD	SAO
18009	78266	
18010	78306	220838
18012	78354	220845
18013	78344	
18014	78443	
18015	78459	220860
18016	78581	220868
19002	78618	
19006	78834	220890
19007	78835	220889
19008	78945	
19010	78962	220899
19011	79002	
19012	79023	220908
19013	79136	220922
19016	79039	220912
19017	78629	220875
19018	78617	
20006	79562	
20007	79561	
20008	79587	
20009	79602	
20010	79773	
20011	79820	220986
20013	79792	220981
20014	79621	220965
21002	76777	220678
21004	76915	220695
21005	76916	
21009	77020	220703
21011	77129	
22002	77224	220724
22005	77487	
22006	77703	
22008	77852	220787

MW268	HD	SAO
22009	77686	
22010	77813	
22012	77685	
23001	77959	220799
23004	78187	220823
23006	78117	220818
23007	78023	220805
23012	78431	220858
23013	78504	
23014	78582	220871
23015	78400	220853
23016	78345	
23017	78268	
24001	78630	
24002	78800	
24004	78836	
24006	78786	220886
24007	78815	
24008	78963	
24009	78986	220903
24010	79071	220915
24011	79024	220907
25001	79276	
25002	79366	
25003	79418	
25004	79460	220954
25005	79717	220969
25006	79901	220995
25007	79919	220996
25012	79759	

MW268 - LS Cross-Reference

MW268	LS		MW268	LS	
1018	1210		16016	1216	
3003	1236		16088	1215	
6014	1211		16091	1217	
6026	1207		17025	1221	
7019	1229		17033	1223	
8028	1233		17042	1225	
9005	1247		18013	1242	
9036	1249		18020	1241	
11007	1212		19052	1253	
11019	1206		21010	1218	
11043	1208		22008	1231	
12008	1230	KS 268	23001	1234	
16005	1202		23016	1243	KS 272
16006	1204		23027	1238	
16007	1203		23032	1237	

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